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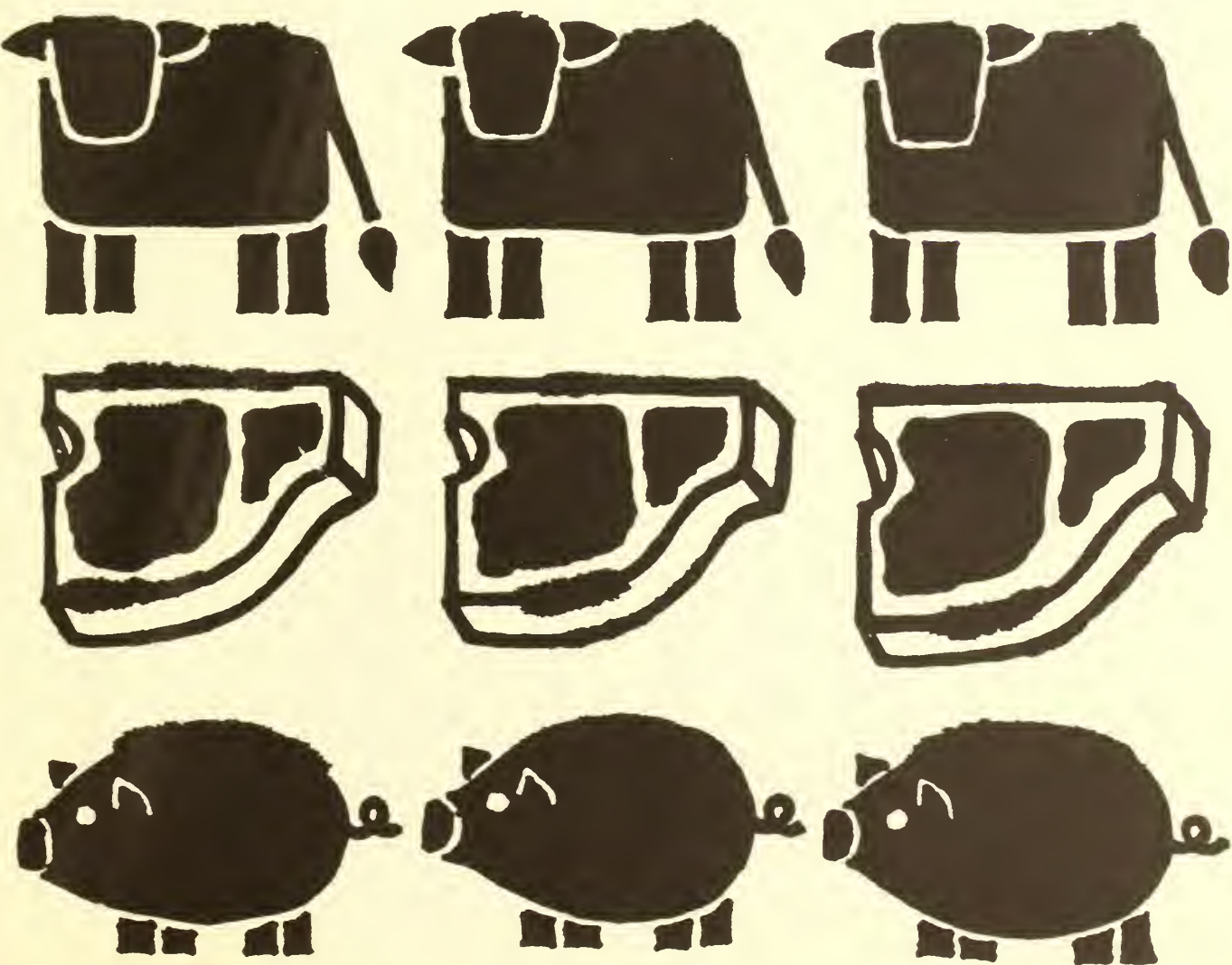
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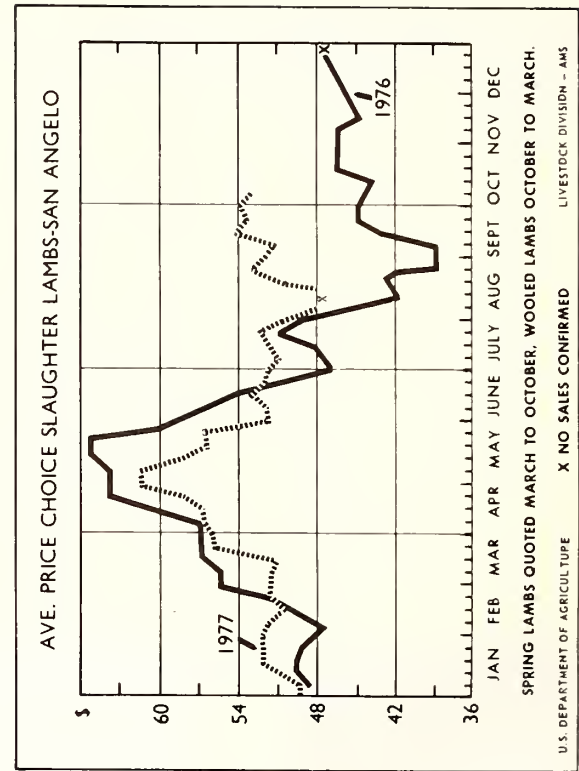
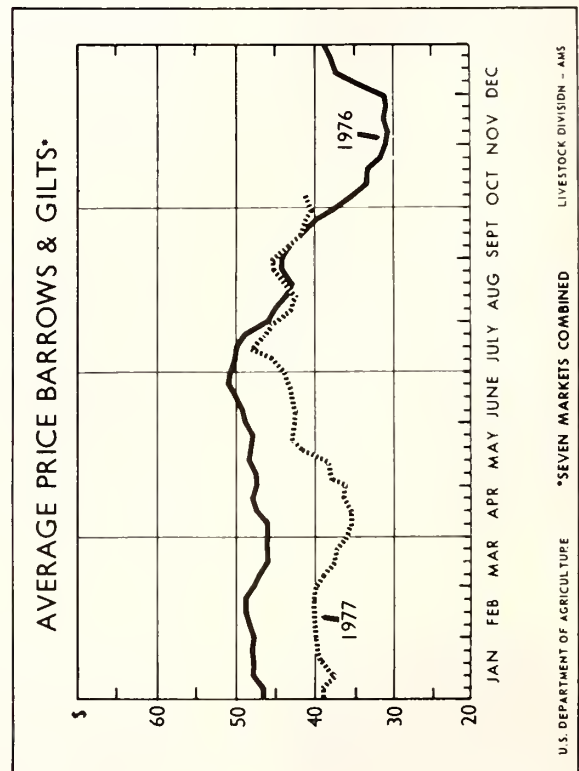
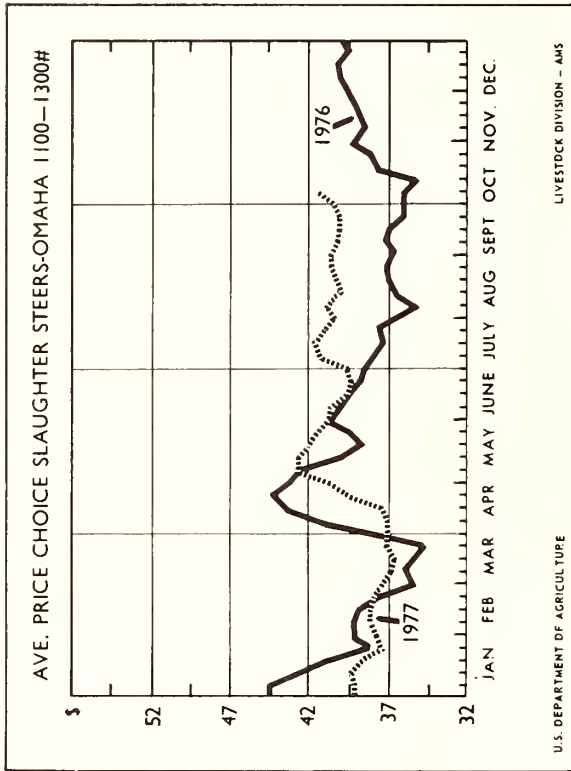
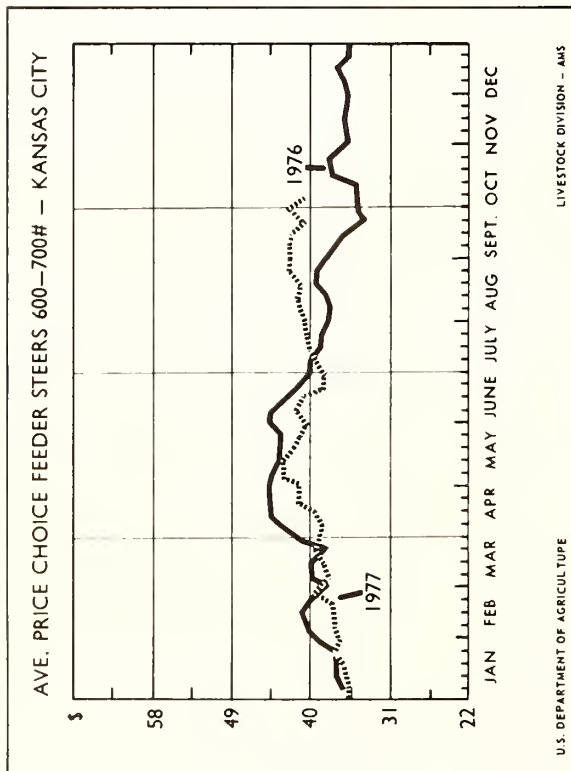
Livestock and Meat Situation

Economic Research Service LMS-217
U.S. Department of Agriculture Oct. 1977

Approved by the
World Food and
Agricultural Outlook
and Situation Board

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LIVESTOCK AND MEAT SITUATION

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SUMMARY

Prospects are for large supplies of red meat and poultry well into 1978. Cyclical developments in the livestock industry point to continued growth in pork and broiler supplies and to only modest reductions in total beef output. The composition of the beef supply will include a greater percentage of fed beef, reflecting growth in cattle feeding and a winding down of the liquidation phase of the cattle cycle.

Per capita consumption of both red meat and broilers was at a record level through the first six months of this year, with red meat consumption exceeding 96 pounds (carcass equivalent), and broiler consumption more than 20 pounds. Seasonal gains in production during the balance of 1977 will increase red meat consumption to perhaps 193 pounds per person for the year. Broiler consumption in the second half will also increase, with annual consumption around 41 pounds. For the year, red meat and broiler consumption may exceed the previous year's record total by 2 to 3 pounds per person.

Prices this fall will reflect the continued large meat supply. Retail pork prices will decline modestly during October-December, following an increase this summer of about 10 percent over the previous quarter. Yet, prices may hold 6 to 8 percent above the relatively low fall quarter 1976 average. This will be the first year-to-year increase in retail pork prices since the spring of 1976. With processing and marketing charges accounting for a greater percentage of the retail value of production, slaughter hog prices may average \$36 to \$38 per cwt., \$6 to \$8 below the third quarter average.

Little change in Choice beef prices from this summer is anticipated. Prices during July-September averaged 2 percent above both the previous quarter and last summer. The gross marketing spread for beef may narrow, with fed cattle prices perhaps averaging in the low \$40's.

Through mid-1978, red meat and broiler consumption are expected to exceed both the year-earlier level, and the seasonally large 1977 second half total. But further gains in consumer income, even if economic growth slows, will likely keep retail

prices modestly above levels for the first half of this year. Year-to-year price gains will be larger for beef than for pork. Pork prices will be significantly below fall 1977 levels.

First half 1978 pork production may be about 10 percent above a year earlier. Hog producers in 14 States reported a 9-percent increase in the June-August pig crop. Farrowing intentions point to a similar increase for the fall quarter.

However, it is unlikely that the industry-wide June-August pig crop was increased as much as indicated for the 14 States. On June 1, planned farrowings for the summer were only 5 percent above last year. Breeding decisions were confined to the months of March through May, during which time sow slaughter under Federal inspection ranged from 25 to 50 percent above year-earlier levels. Also, industry data suggests no significant decline in gilt slaughter during these months. The breeding inventory at the beginning of the summer quarter, when sows were already bred, was only 2 percent larger.

Hog slaughter during the fourth quarter of this year may be off 2 to 3 percent, notwithstanding a 60-pound-plus market hog inventory equal to a

year ago. With only 5 percent more market hogs weighing less than 60 pounds on September 1, the increase in hog slaughter this winter may be limited to 7 to 8 percent. If farrowings intentions for the fall quarter are realized, the increase in April-June 1978 slaughter will exceed 10 percent.

Lower feed costs prompted an increase of almost a third in the number of cattle going on feed in 7 States during July. A more modest increase was reported for August. Assuming placements during September are near the large year-earlier level, the July-September total for 23 States could be up 10 to 12 percent. With marketings from feedlots this summer within 1 to 2 percent of last year, the October 1 cattle on feed inventory could be up 3 to 5 percent. This inventory buildup is expected to continue in 1978.

Fed cattle marketings this fall may be about 5 percent larger than a year ago. Through the first half of 1978, slaughter of grain-finished cattle may be increased 3 to 4 percent over this year. While not sufficient to offset likely reductions in grass fed slaughter, the suggested increase in fed beef supplies argues against significant price improvement in the fed cattle market through much of 1978.

SITUATION AND OUTLOOK

Commercial Meat Production and Livestock Prices

	1976				1977				1978	
	I	II	III	IV	I	II	III ¹	IV ¹	I ¹	II ¹
Production:										
Beef (mil. lb.)	6,492	6,145	6,618	6,412	6,285	6,162	6,330	6,250	6,150	5,950
% Δ year earlier	+11	+10	+11	+2	-3	0	-4	-3	-2	-3
Pork (mil. lb.)	2,958	2,847	3,014	3,669	3,293	3,186	3,100	3,550	3,600	3,550
% Δ year earlier	-6	-5	+18	+27	+11	+12	+3	-3	+9	+11
Lamb and Mutton (mil. lb.)	95	82	92	92	90	86	85	88	85	80
% Δ year earlier	-6	-15	-12	-6	-5	+5	-8	-4	-6	-7
Veal (mil. lb.)	206	178	205	224	203	186	205	195	160	120
% Δ year earlier	+24	-2	-12	-9	-1	+4	0	-13	-21	-35
Total Red Meat (mil. lb.)	9,751	9,252	9,929	10,397	9,871	9,620	9,720	10,083	9,995	9,700
% Δ year earlier	+5	+4	+12	+9	+1	+4	-2	-3	+1	+1
Broilers ² (mil. lb.)	2,116	2,314	2,372	2,186	2,156	2,400	2,440	2,270	2,260	2,570
% Δ year earlier	+15	+12	+14	+10	+2	+4	+3	+4	+5	+7
Turkeys ² (mil. lb.)	207	369	710	664	210	365	675	665	230	400
% Δ year earlier	+24	+28	+14	+5	+1	-1	-5	0	+10	+10
Total Red Meat & Poultry (mil. lb.)	12,074	11,935	13,011	13,247	12,237	12,385	12,835	13,018	12,485	12,670
% Δ year earlier	+7	+6	+13	+9	+1	+4	-1	-2	+2	+2
Prices:										
Choice steers, Omaha 900-1100 lb. \$/cwt.	38.71	41.42	37.30	39.00	37.88	40.77	40.47	40.42	40.42	42.44
Barrows & gilts, 7 mths. \$/cwt.	47.99	49.19	43.88	34.25	39.08	40.87	43.85	36.38	34.36	33.35
Slaughter lambs, Choice San Angelo \$/cwt.	51.50	58.63	43.54	45.81	52.98	55.76	51.88	48.50	52.54	56.58
Broilers, 9-city avg. Cents/lb. ⁴	42.2	41.7	41.5	35.5	40.9	42.3	42.4	38.40	38.40	37.39
Turkeys, New York Cents/lb.	49.3	48.2	48.5	49.0	50.2	51.5	53.1	53.55	49.51	47.49

¹ Forecast. ² Federally inspected. ³ Wholesale weighted average. ⁴ Wholesale, 8-16 lb. young hens.

FEED SITUATION AND LIVESTOCK PRODUCTION COSTS

Based on September 1 conditions, record large 1977 crops of corn and soybeans are projected. The projected 6,229 million bushel corn crop, which accounts for about 80 percent of the feed grain crop, is expected to push 1977 feed grain production up to a record 198 million metric tons, 3 percent above the 1976 crop. At the projected level of 1,644 million bushels, this year's soybean crop would be 30 percent above last year. These record large crops will have a significant influence on meat supplies during the coming months.

Feed Costs Down

Large feed grain production in 1976 helped build up what had been a relatively low level of grain stocks. The larger carryover and the expectation of another large crop in 1977 affected corn prices, which have trended downward all year. The U.S. average price received by farmers for corn fell to \$1.59 per bushel in mid-September, the lowest since April 1973.

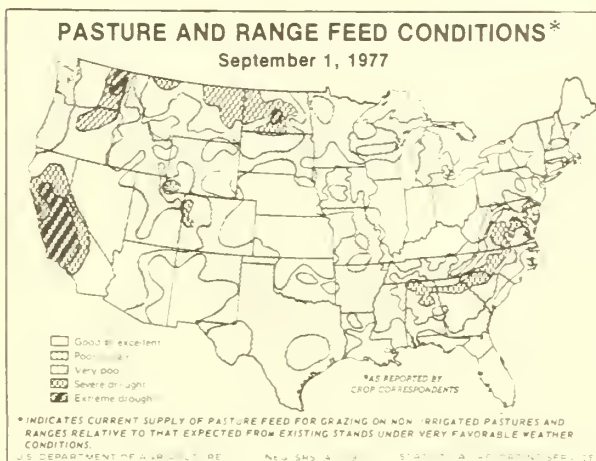
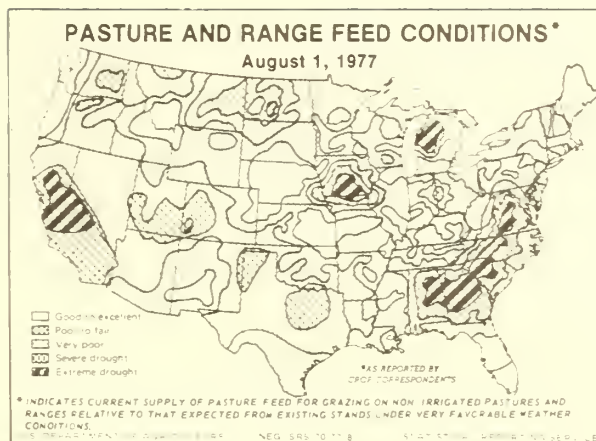
With last year's small soybean crop, protein supplement supplies began to tighten early in 1977. This spring, soybean meal prices rose sharply from last fall's level. Since then, however, soybean meal prices have declined.

The lower corn prices this summer, combined with soybean meal prices near last summer's level, have lowered livestock feeding costs. This summer, feed costs per 100 pounds of gain for cattle in feedlots have probably declined by \$10 or more from the year-earlier level. Hog producers have also seen substantial declines in their feed costs.

Even with a record large corn crop expected for this year, corn prices likely will not be much, if any, below the low September price. The new farm legislation, and the announced loan rate of \$2.00 per bushel for corn, will probably keep the season average corn price near the loan rate with some seasonal variation. Therefore, feed costs in late 1977 and particularly in 1978 will probably be above this summer's level, but below the 1976 level.

Forage Supplies are a Critical Factor for the Next Few Months

Hay stocks were reduced to very low levels last winter as the severe weather caused an increase in hay feeding. Growing conditions in many areas of the United States were poor this summer and hay production was below normal. Also, shortages of irrigation water in some of the western areas limited hay production. This could lead to shortages of hay in some areas this winter. Hay production was



good in some areas but, even if these areas have a surplus, transportation charges may be high enough to prohibit movement to where it is needed. These factors suggest that hay will probably remain expensive through the winter, particularly if the weather is severe.

Pasture and range conditions over much of the United States improved during August as widespread rainfall alleviated the drought that had existed in many areas. However, grazing conditions remain critical in some parts of the country. Continued improvement in grazing conditions and a good season for annual grazing crops seeded this fall could substantially reduce the pressure for further liquidation of the cattle herd.

Livestock Production Costs

Expected large crops of corn and soybeans likely will keep 1978 feed costs below the level of the past few years. For cattle raisers, however, hay costs are expected to remain relatively high until next

year. Lower feed costs should be more than sufficient to offset increases in other inputs. Costs of labor, transportation, veterinary services, medicines, energy, and other supplies are expected to continue to rise next year.

Overall, the cost of producing beef, pork, and lamb will probably be a little lower next year than in the past few years. Declining prices for hogs, however, will squeeze producer profits. Cattle feeders will also see their profits squeezed if feeder cattle prices are bid up sharply.

HOGS

With large 1977/78 corn and soybean crops, hog producers have resumed earlier expansion efforts frustrated by a particularly severe winter and disease problems. On September 1, producers in 14 States planned increases of 10 and 11 percent, respectively, in the fall and winter quarter pig crops. Respondents to the June producer survey planned only a 4-percent increase in September-November farrowings. The September survey provides the first reading on planned farrowings for the winter quarter of 1978.

The September 1 inventory of all hogs and pigs was 3 percent larger than a year earlier. Market hog numbers were up 2 percent. Hogs weighing sixty pounds and heavier, which will account for slaughter for the balance of 1977, equaled last year's inventory. The number of pigs weighing less than 60 pounds was 5 percent larger and reflects the larger June-August pig crop. This larger inventory assures a resumption of year-to-year increases in pork production with the winter quarter of 1978.

The number of animals held for breeding on September 1 was 8 percent larger than a year ago. Typically, the breeding inventory is reduced from the midyear total, as sows are culled from the seasonally larger March-May pig crop. However, gilts added to the breeding herd resulted in a 1-percent increase from June 1. Much of the buildup in the breeding inventory anticipated for the second half apparently took place during late summer. Supplementing slaughter during the final six months of 1976 was the liquidation of approximately 400 thousand head of breeding stock. Over the same 6 months of this year, slaughter may be limited by a 200- to 300-thousand head buildup in the breeding herd. The December 1 breeding inventory may be up 10 percent from the previous year. This would support an increase in the spring quarter 1978 pig crop of 10 percent or more.

Hog slaughter for 1977 will total about 77½ million head, an increase of 5 percent over the previous year. If farrowings for the fall quarter are increased 10 percent as planned, hog slaughter

through the first half of 1978 could be up 10 to 12 percent. An increase in the December-May 1978 pig crop equal to that planned for the 1978 winter quarter could boost that year's total slaughter 12 to 14 percent above 1977. At the projected level, slaughter would be about 7 percent less than the record large number for 1971.

Production of competing meats will be less in 1978. A 5 percent or larger gain in broiler production is expected, but this will be more than offset by a 3- to 5-percent reduction in total beef output. Assuming continued growth in demand, the decline in retail pork prices for 1978 may be limited to about 5 percent. A greater reduction in slaughter hog prices is in prospect. The effects of inflation on marketing costs point to a wider farm-retail price spread. With processing and marketing costs accounting for a greater percent of the retail value of pork produced, slaughter hog prices may average in the low-to middle-\$30 range, off from an average near \$40 per 100 pounds this year.

Hog Slaughter Down From 1976 Level In Fourth Quarter

Hog slaughter this October-December may be off 2 to 3 percent from last year. This is likely despite the equally large September 1 inventory of market hogs in the middle weight groups. With the hog-corn ratio in recent weeks at the highest level since 1973, slaughter may be limited by additional hold-back of gilts for breeding. Reductions in slaughter from the previous year will be greatest early in the quarter when the 4 percent fewer market hogs weighing 120 to 180 pounds on September 1 are marketed. Weekly slaughter under Federal inspection should average above 1.5 million head for the quarter.

October-December pork production may be up 15 percent from this summer, and any seasonal reduction in the beef supply will be small. Total red meat supplies may be about 4 percent larger than during the previous quarter. Prices at both the farm and retail level will decline. With a widening of the gross marketing spread, slaughter hog prices may average \$6 to \$8 below the third quarter average of \$44 per 100 pounds.

Large Pig Crop To Boost Production in Winter Quarter

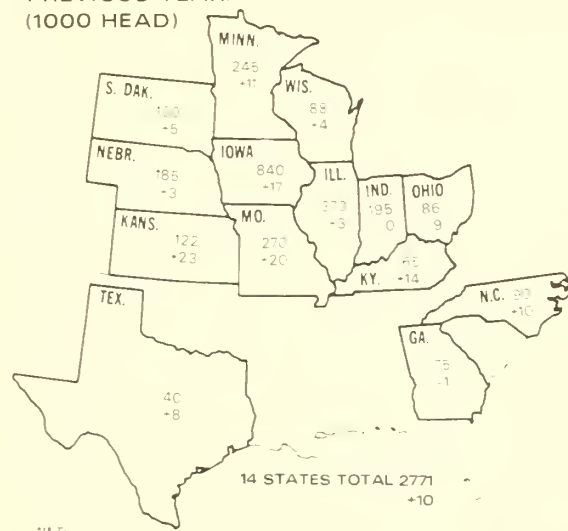
Pigs farrowed this summer—the June-August pig crop—will supply most of the slaughter hogs marketed during the winter quarter of 1978. Following a 1-percent reduction in farrowings this spring, producers in 14 major States reported June-August farrowings 10 percent over a year earlier. A smaller average litter size limited the increase in this pig crop to 9 percent.

September 1 inventory, farrowings and pig crops,
14 selected States

Item	1975	1976	1977	1978	1977/ 1976
	1,000 head	1,000 head	1,000 head	1,000 head	% change
INVENTORY: ...	41,535	48,785	50,120		+3
Breeding: ...	6,011	6,813	7,324		+8
Market: ...	35,524	41,972	42,796		+2
Weight groups					
-60 lb.	14,397	17,084	17,957		+5
60-119 lb. ...	8,990	10,643	10,740		+1
120-179 lb. ...	7,182	8,481	8,169		-4
180-219 lb. ...	4,157	4,857	5,063		+4
220 lb. + ...	798	907	867		-4
FARROWINGS:					
Dec.-Feb.	1,778	2,049	2,319	2,579	+13
Mar.-May	2,428	2,910	2,883	(+11)	-1
Dec.-May	4,206	4,959	5,202		+5
June-Aug.	2,088	2,523	2,766		+10
Sept.-Nov.	2,103	2,520	2,771		+10
June-Nov.	4,191	5,043	5,537		+10
PIG CROPS:					
Dec.-Feb.	12,540	14,566	15,723		+8
Mar.-May	17,469	21,478	21,357		-1
Dec.-May	30,009	36,044	37,080		+3
June-Aug.	15,020	18,416	20,006		+9
Sept.-Nov.	15,182	17,939			
June-Nov.	30,202	36,355			
PIGS PER LITTER:					
Dec.-Feb.	7.05	7.11	6.78		-5
Mar.-May	7.19	7.38	7.41		0
Dec.-May	7.13	7.27	7.13		-2
June-Aug.	7.19	7.30	7.23		-1
Sept.-Nov.	7.22	7.12			
June-Nov.	7.21	7.21			

¹ Intentions.

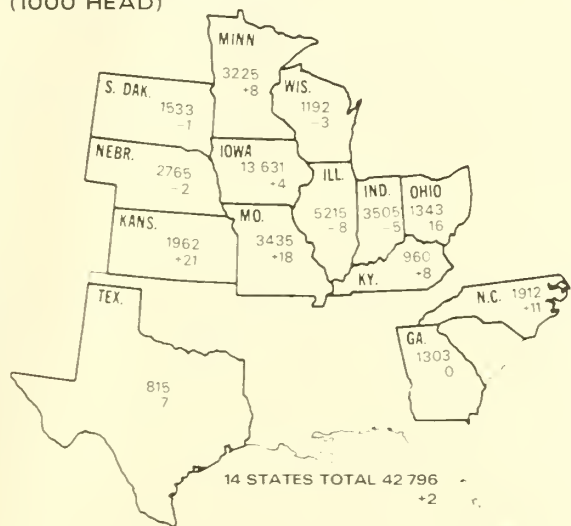
* SOWS FARROWING
SEPTEMBER-NOVEMBER 1977
AND PERCENT CHANGE FROM
PREVIOUS YEAR.
(1000 HEAD)



USDA

NEG ERS 823 77 10

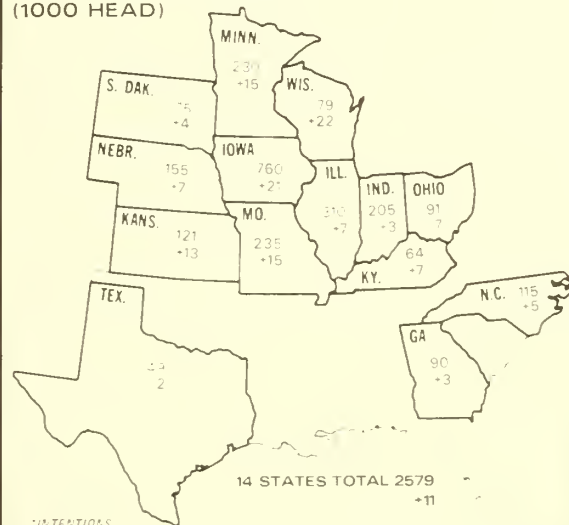
MARKET HOGS ON FARMS
SEPTEMBER 1, 1977
AND PERCENT CHANGE
FROM PREVIOUS YEAR.
(1000 HEAD)



USDA

NEG ERS 824 77 10

SOWS FARROWING
DECEMBER-FEBRUARY 1978
AND PERCENT CHANGE
FROM PREVIOUS YEAR.
(1000 HEAD)



INTENTIONS

USDA

NEG ERS 825 77 10

Table 1—Pork supplies and prices

Year	Estimated commercial slaughter ¹				Average dressed weight	Commercial production	Per capita consumption ²	Prices		
	Barrows and gilts	Sows	Boars	Total				Retail	Barrows and gilts 7 markets	Farm
	<i>1,000 head</i>				<i>Lb.</i>	<i>Mil lb.</i>	<i>Lb.</i>	<i>Cents per lb.</i>	<i>\$/cwt.</i>	
1973: I ...	18,949	1,080	195	20,224	170	3,385	16.6	98.1	35.63	34.50
II ...	18,274	998	206	19,478	172	3,328	16.2	103.1	36.82	35.90
III ...	15,482	1,190	203	16,875	178	2,869	14.4	121.8	49.04	47.13
IV ...	18,842	1,195	181	20,218	173	3,461	16.7	116.1	40.96	39.87
Year	71,547	4,463	785	76,795	173	13,043	63.9	109.8	40.27	39.35
1974: I ...	18,887	1,075	187	20,149	173	3,481	17.2	115.2	38.40	38.13
II ...	19,659	1,174	181	21,014	175	3,670	17.8	99.3	28.00	27.03
III ...	17,699	1,802	204	19,705	172	3,381	16.8	107.4	36.59	34.63
IV ...	19,124	1,588	182	20,894	171	3,568	17.3	111.0	39.06	37.43
Year	75,369	5,639	754	81,762	172	14,100	69.1	108.2	35.12	34.31
1975: I ...	17,711	886	162	18,759	167	3,142	15.5	114.4	39.35	38.43
II ...	16,704	939	165	17,808	168	2,991	14.4	123.1	46.11	43.93
III ...	14,151	1,003	153	15,307	167	2,556	12.5	149.2	58.83	56.20
IV ...	15,659	982	172	16,813	172	2,897	13.7	153.4	52.20	51.67
Year	64,225	3,810	652	68,687	169	11,586	56.1	135.0	48.32	47.56
1976: I ...	16,605	694	132	17,431	170	2,958	14.3	141.5	47.99	47.10
II ...	15,962	718	141	16,821	169	2,847	13.6	138.5	49.19	47.93
III ...	16,872	964	147	17,983	168	3,014	14.5	137.4	43.88	43.30
IV ...	20,215	1,184	150	21,549	170	3,669	17.2	119.8	34.25	33.47
Year	69,654	3,560	570	73,784	169	12,488	59.3	134.3	43.11	42.95
1977: I ...	18,471	1,080	217	19,768	167	3,293	15.7	120.6	39.08	38.13
II ...	17,588	950	211	18,749	170	3,186	14.9	121.8	40.87	39.53
III ...	17,075	1,105	200	18,380	169	3,100	14.8	132.0	43.85	42.63
IV ...										
Year										

¹ Classes estimated. ² Total, including farm production.

The increase in the 14-State pig crop may be somewhat larger than that for the industry. On June 1, planned farrowings for the summer were only 5 percent more than last year. Breeding decisions for this pig crop were confined to the months of March through May, during which sow slaughter under Federal inspection ranged from 25 to 50 percent above year-earlier levels. Also, some industry data suggests no significant decline in gilt slaughter during these months. The breeding inventory at the beginning of the summer quarter, when sows were already bred, was 2 percent larger.

With only 5 percent more market hogs weighing less than 60 pounds on September 1, the increase in hog slaughter this winter may be limited to 7 to 8 percent. If farrowing intentions for the fall quarter are realized, the increase in April-June slaughter will exceed 10 percent.

Through the first half of 1978, red meat production is expected to continue above the year-earlier level, and the seasonally large second half 1977 total. But further gains in consumer income, even if economic growth slows, will keep retail prices modestly above levels for the first half of this year. Year-to-year increases for beef will be much greater

than for pork. Growth in demand at the farm level will be less. Slaughter hog prices through the first half may be off 15 percent from a year earlier with a middle-\$30 average. Assuming some seasonal reduction in both beef and pork production during the spring quarter, little difference would be expected in the winter and spring quarter price averages.

Prospects For Second Half Less Certain

The first indication of potential farrowings for December-February 1978 is for an 11-percent increase over this year. Breeding of sows to farrow during the winter quarter is confined to the months of August through October. Thus, potential slaughter through the third quarter of 1978 is essentially determined. Although the hog-corn ratio this summer held consistently above 20 to 1, federally inspected sow slaughter during July and August exceeded the year-earlier levels by 25 and 17 percent, respectively. Through late July, limited subsoil moisture made prospects for the corn crop uncertain. According to industry data, gilt slaughter as a percent of total barrow and gilt slaughter continued high. But August data suggested a sig-

Hog prices per 100 pounds, 7 markets¹

Month	Barrows and gilts			Sows		
	1975	1976	1977	1975	1976	1977
	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.
Jan.	38.93	48.40	39.52	35.01	40.48	33.58
Feb.	39.61	48.85	40.18	36.52	44.03	35.84
Mar.	39.52	46.71	37.53	36.58	42.24	34.26
Apr.	40.69	47.89	36.97	37.00	42.88	34.09
May	46.44	48.89	41.79	41.12	43.20	36.99
June	51.19	50.80	43.86	44.28	43.21	37.84
July	57.17	48.26	45.76	49.74	40.83	38.63
Aug.	58.10	44.00	44.38	51.89	37.98	38.00
Sept.	61.23	39.39	41.40	54.56	33.81	37.08
Oct.	58.52	32.66		51.94	26.87	
Nov.	49.74	32.05		42.25	23.64	
Dec.	48.33	38.05		38.50	28.30	
Av.	48.32	43.11		43.65	37.92	

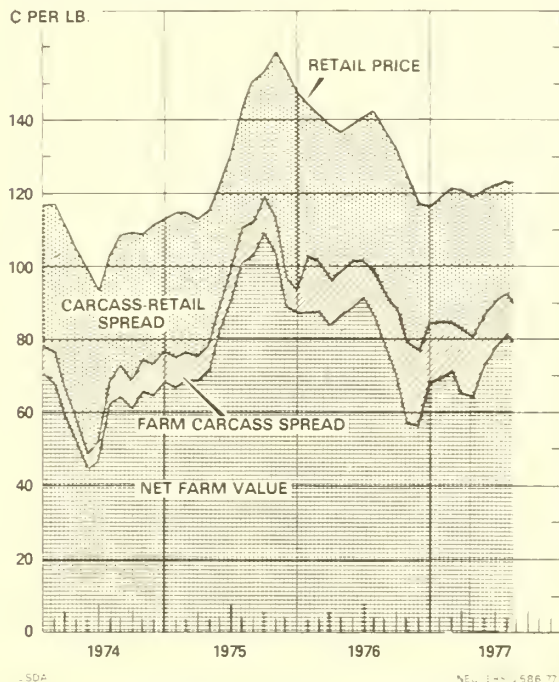
¹ Average for all weights at Midwest markets.

nificant decline in gilt slaughter. The September inventory of market hogs weighing 120 to 180 pounds was reduced 4 percent, and probably accounted for much of the 8-percent increase in the breeding herd. The December 1 breeding inventory may be increased further, with gains in the March-May pig crop at least as great as that planned for the winter quarter. Slaughter during the second half of 1978 could then be increased 15 percent over this year.

For second half of 1978, slaughter may be 5 percent or more above that for January-June. Since 1971, the second half total has averaged 2 percent less. Reductions from the first half total ranged from 2 to 12 percent for the years 1971 through 1975. During 1976, the second half total increased 15 percent. A 1-percent increase is projected for July-December of this year. Although typically the low point in slaughter, the 1978 July-September total likely will exceed that for the spring quarter. Slaughter could be up one-fifth over the summer quarter of this year. The magnitude of the increase in slaughter reflects heavy death losses in the 1977 winter quarter pig crop and the corresponding small year-to-year increase in July-September slaughter. A more modest increase over the pre-

vious year is likely for the fall quarter of 1978. Hog prices are expected to decline throughout the second half.

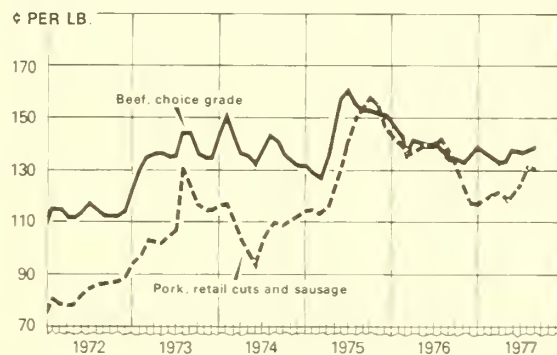
PRICE SPREADS FOR PORK



USDA

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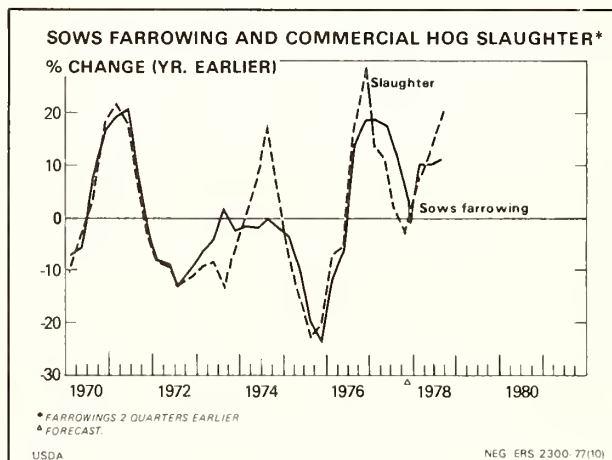
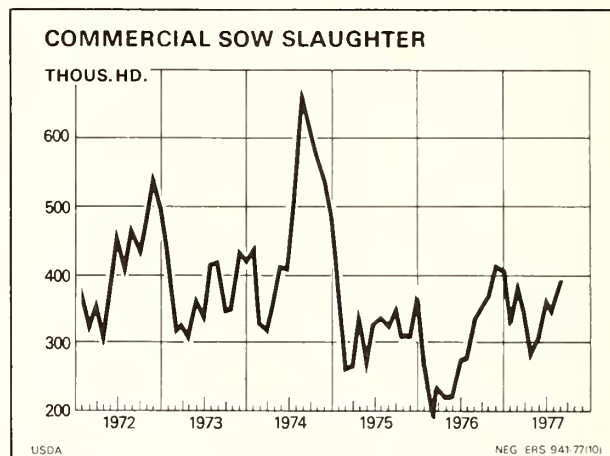
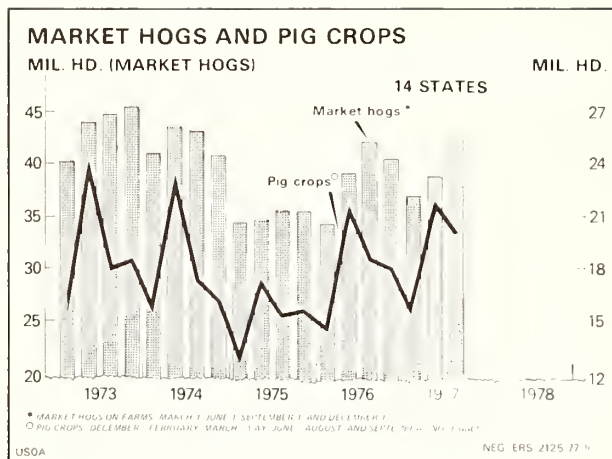
RETAIL MEAT PRICES*



* ECONOMIC RESEARCH SERVICE COMPOSITE RETAIL PRICES

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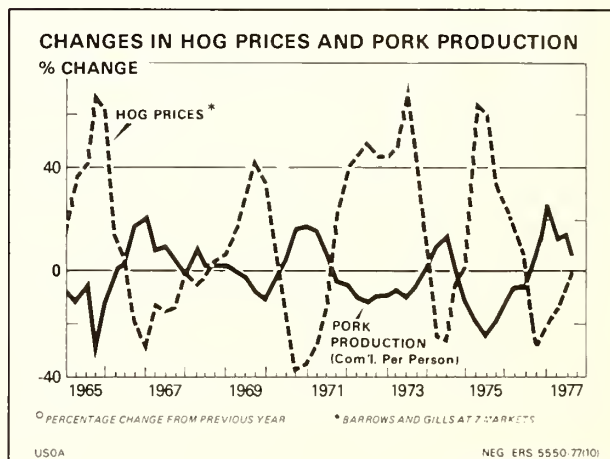
Hog-corn price ratio, Omaha basis

Month	1973	1974	1975	1976	1977
January . . .	21.5	14.8	12.6	18.6	16.4
February . .	23.3	13.4	14.1	18.6	16.8
March	25.4	12.5	14.3	17.7	15.9
April	23.4	12.1	14.1	18.3	16.0
May	19.5	10.2	16.4	17.7	18.8
June	16.9	10.0	17.9	17.6	20.7
July	19.9	11.2	19.4	16.8	23.8
August	20.8	10.5	18.6	16.2	26.4
September . .	18.4	10.3	20.7	15.1	24.1
October . . .	17.8	10.6	21.2	13.7	
November . .	16.9	11.0	19.4	14.4	
December . .	15.7	11.8	18.5	16.4	
Average . . .	19.3	11.3	16.9	16.5	

Feeder pig prices consistent with break-even all costs, given corn and market hog prices¹

Corn (Farm price)	Market hogs, \$/cwt.					
	25	30	35	40	45	50
\$bu.	Feeder pigs, \$ per hd.					
1.50	6	17	28	39	50	61
1.75	3	14	25	36	47	58
2.00	1	12	23	34	45	56
2.25	—	9	20	31	42	53
2.50	—	6	17	28	39	50
2.75	—	3	14	25	36	47
3.00	—	1	12	23	34	45
3.25	—	—	9	20	31	42

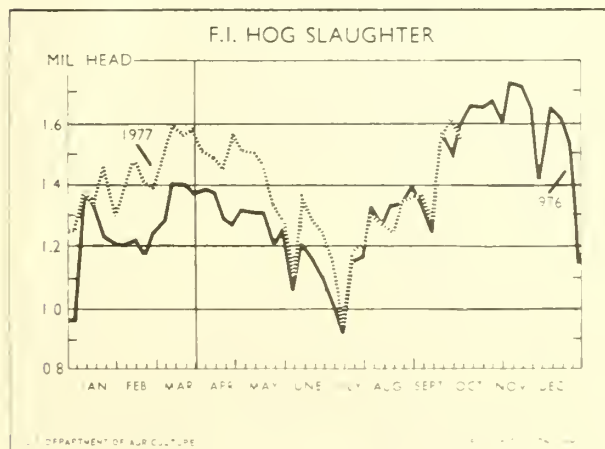
¹ Assuming protein and other costs at September 1977 levels. Includes \$4.38 in fixed costs. (See hog feeding table).



Federally inspected hog slaughter

Week ended 1977 ¹	1973	1974	1975	1976	1977
	Thou.	Thou.	Thou.	Thou.	Thou.
Jan. 8	1,559	1,566	1,588	1,407	1,389
15	1,527	1,577	1,432	1,326	1,333
22	1,555	1,598	1,385	1,227	1,495
29	1,342	1,328	1,450	1,203	1,344
Feb. 5	1,488	1,185	1,424	1,208	1,356
12	1,471	1,541	1,419	1,234	1,519
19	1,372	1,403	1,340	1,168	1,471
26	1,525	1,564	1,352	1,255	1,379
Mar. 5	1,542	1,554	1,453	1,273	1,534
12	1,522	1,555	1,395	1,422	1,632
19	1,596	1,493	1,393	1,403	1,568
26	1,354	1,637	1,315	1,383	1,609
Apr. 2	1,430	1,589	1,404	1,388	1,518
Apr. 9	1,352	1,519	1,439	1,387	1,502
16	1,441	1,602	1,478	1,290	1,488
23	1,454	1,515	1,401	1,271	1,576
30	1,612	1,547	1,368	1,321	1,522
May 7	1,561	1,678	1,301	1,309	1,527
14	1,412	1,534	1,221	1,316	1,439
21	1,433	1,626	1,221	1,197	1,336
28	1,263	1,392	1,101	1,257	1,283
June 4	1,397	1,621	1,294	1,038	1,112
11	1,378	1,596	1,254	1,199	1,383
18	1,282	1,343	1,163	1,155	1,298
25	1,319	1,285	1,132	1,103	1,253
July 2	1,016	984	853	1,024	1,164
July 9	1,155	1,313	1,061	941	949
16	1,037	1,242	1,100	1,159	1,232
23	1,306	1,326	1,055	1,181	1,214
30	1,267	1,476	1,027	1,265	1,287
Aug. 6	1,343	1,443	1,051	1,342	1,264
13	1,214	1,454	1,157	1,344	1,315
20	1,127	1,377	1,057	1,332	1,342
27	1,116	1,482	1,169	1,401	1,368
Sept. 3	1,107	1,347	996	1,350	1,411
Sept. 10	1,303	1,628	1,267	1,227	1,270
17	1,467	1,622	1,258	1,579	1,568
24	1,469	1,600	1,198	1,508	1,613
Oct. 1	1,451	1,585	1,188	1,593	1,550
Oct. 8	1,529	1,602	1,159	1,647	
15	1,439	1,541	1,193	1,660	
22	1,309	1,491	1,163	1,669	
29	1,518	1,475	1,194	1,599	
Nov. 5	1,519	1,583	1,275	1,729	
12	1,561	1,574	1,336	1,706	
19	1,243	1,594	1,376	1,646	
26	1,584	1,305	1,069	1,386	
Dec. 3	1,576	1,654	1,372	1,644	
Dec. 10	1,426	1,574	1,237	1,614	
17	1,509	1,492	1,219	1,522	
24	1,088	1,015	949	1,140	
31	1,203	1,014	970	1,206	

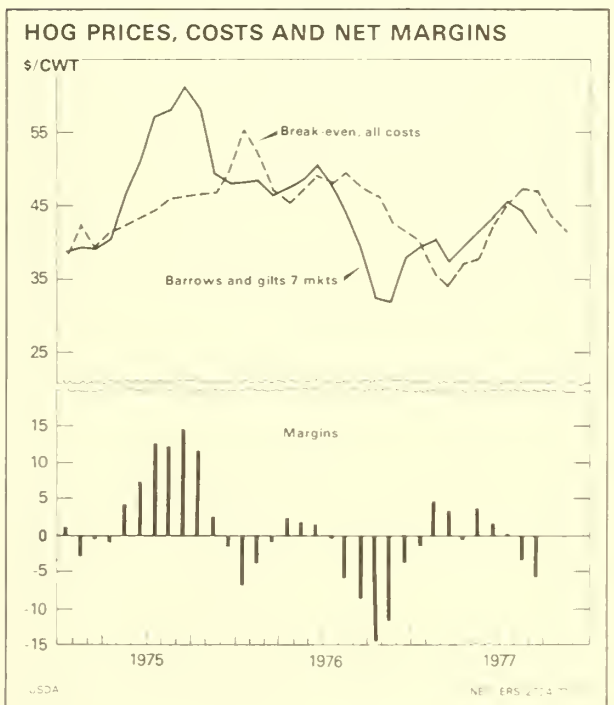
¹ Corresponding dates: 1973, January 13; 1974, January 12; 1975, January 11; 1976, January 10.



Hog prices, costs, and net margins¹

Year	Barrows & gilts 7 markets	Feed and Feeder	Break- even	Net margins
\$ per cwt.				
1975				
January	38.93	31.33	37.85	+1.08
February	39.61	35.50	42.33	-2.72
March	39.52	32.99	39.75	-.23
April	40.69	34.72	41.65	-.96
May	46.44	35.27	42.29	+4.15
June	51.19	36.49	43.69	+7.50
July	57.17	37.31	44.64	+12.53
August	58.10	38.90	46.02	+12.08
September ...	61.23	39.15	46.32	+14.91
October	58.52	39.60	46.82	+11.70
November	49.74	39.58	46.90	+2.84
December ...	48.33	42.29	49.66	-1.33
1976				
January	48.40	47.31	55.12	-6.72
February	48.85	44.77	52.80	-3.95
March	46.71	39.81	47.56	-.85
April	47.89	37.87	45.48	+2.41
May	48.89	39.29	46.94	+1.95
June	50.80	41.23	49.15	+1.65
July	48.26	40.49	48.35	-.09
August	44.00	41.81	49.79	-5.79
September ...	39.39	39.96	47.74	-8.35
October	32.66	39.21	46.84	-14.18
November	32.05	36.20	43.57	-11.52
December ...	38.05	34.70	41.85	-3.80
1977				
January	39.52	33.60	40.65	-1.13
February	40.18	28.62	35.46	+4.72
March	37.53	27.23	34.14	+3.39
April	36.97	30.41	37.42	-.45
May	41.79	30.75	37.83	+3.96
June	43.86	34.91	42.43	+1.43
July	45.76	37.99	45.70	+0.06
August	44.38	38.89	47.71	-3.33
September ...	41.40	39.25	47.21	-5.81
October		35.71	43.48	
November		34.15	41.96	
December ...		33.45	41.22	

¹ Selling price required to cover costs of feeding 40-50 lb. feeder pig to 220 lb. slaughter hog in Corn Belt.



CHANGES IN THE PORK PRODUCTION AND CONSUMPTION SERIES

by
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Pork production and pork consumption as reported by USDA have traditionally been reported on a pork excluding lard basis. During recent years, the procedure used to obtain these estimates has been questioned. The pork series differed from beef, veal, and lamb and mutton in that production data for each of the other species was reported on a carcass weight basis. Moreover, the pork excluding lard series was trending toward the packer style carcass weight as the average hog marketed became leaner over time.

Both production and consumption series for pork have been converted to a packer style carcass weight system. This article attempts to provide information on why the pork excluding lard series has been dropped and an explanation of the present method used. Estimates of historical data consistent with the new series is also presented.

History

Many years ago lard was a valuable part of the hog and was separated out as a lard consumption series. Packers also produced both packer and shipper (includes head, leaf fat, and feet) style carcasses. The pork excluding lard series was thus developed by taking the packer style carcass dressing percentage, adding seven percent to reflect a shipper style carcass, and then subtracting the fat percentage. (To obtain the fat percentage it was assumed that three pounds of lard were obtained from four pounds of fat. Thus, the lard percentage was divided by .75 and then .5 percent was added to reflect fat from the head.) The result was the estimated pork excluding lard dressing percentage.

Packers reported packer style carcass weights and this method was used to calculate pork excluding lard. In recent years it became evident that the packer style carcass data and the pork excluding lard data were converging, indicating that either the procedure needed updating, the lard yield was changing, or some of the original assumptions were no longer applicable.

Presented with this situation, the Statistical Reporting Service (SRS) switched to reporting production on a packer style carcass basis. Packers report their production by these specifications: "Total dressed weight, chilled basis, leaf fat out, kidneys out, jowls on, and head off." While SRS did not release a historical series consistent with the new carcass series, table 1 provides estimates of production obtained by reversing the procedure used by SRS in previous years. Use of packer style

carcass data is appropriate since packers in the United States no longer produce shipper style carcasses.

Changes in the Consumption Series

With SRS production estimates now on a packer style carcass basis, it is logical that ERS change the consumption series to be consistent. Also it means that the pork series is now more consistent with the carcass consumption series for other species.

The more difficult consumption series to change is the retail weight series which previously was a constant 93 percent of the pork excluding lard. With the changing mix of meat and fat on the carcass over time, the carcass to retail conversion must also change. Pork fat, except for leaf fat, is now included in the carcass series. The procedure developed to convert carcass to retail weight uses the lard and pork fat rendered series. Lard is converted to fat using a 75 percent lard yield. The lard produced from leaf fat is deducted, however, using 1.7 percent of the liveweight as leaf fat in 1977. This percentage is increased by .05 each year until 2.25 is reached in 1966. It then remains constant at 2.25 in all prior years. To obtain a historical series on a packer style carcass basis, 7 percent was subtracted from the published shipper style carcass dressing percentage. Then the fat percentage and a 1.5 percent waste and shrink estimate is deducted and a processing increase (e.g. water added to hams) of 1.7 is added to obtain the actual percent of pork sold at retail. This meat dressing percentage is then divided by the packer style carcass dressing percent to obtain the carcass to retail conversion factor. The conversion factor thus changes for each month, quarter, or year that carcass weight is converted to retail weight. Historical retail weight consumption estimates are provided in table 1. Conversion factors for determining retail weight in the future will use this same procedure. The 1.7 percent leaf fat will remain constant unless cutting data indicates a change is needed.

Effects of Change

A comparison of the packer style carcass consumption estimates and the historical pork excluding lard series indicates that the values are presently close but the differences increase as we go back in time. Thus, with the carcass weight series, per capita consumption shows a downward trend

over time resulting from the fact that hogs were fatter in earlier years. In contrast, the retail weight series changes little either currently or in past years, as this reflects pork cuts and is not affected by the amount of fat on the carcass.

The fact that the term pork excluding lard is being dropped to go to carcass weight does not mean the carcass weight series is now to be called pork including lard, although the fat (or lard) on the packer style carcass is included. Leaf fat has

been removed. Similarly, the carcass weight beef consumption series is not called beef including tallow. The fact that it is a carcass weight series implies that it includes whatever is on the carcass.

While the carcass weight data have traditionally been quoted when referring to per capita consumption, the carcass, whether beef, pork, or lamb, is not all purchased or eaten by the consumer. Thus, the retail weight series is a closer approximation to what the consumer buys and consumes.

Table 1—Revised pork production and consumption series, 1955-76

	Commercial pork production	Total pork consumption	Per capita pork consumption	
			Carcass weight	Retail weight
1955	12,295	13,278	81.8	61.9
1956	12,675	13,679	82.7	62.3
1957	11,785	12,646	75.1	56.6
1958	11,658	12,519	73.0	56.0
1959	13,496	14,313	82.0	62.7
1960	13,026	13,838	77.6	60.3
1961	12,851	13,440	74.2	57.6
1962	13,258	13,774	75.0	59.1
1963	13,848	14,236	76.3	61.1
1964	14,033	14,421	76.2	60.9
1965	12,327	12,870	67.2	54.7
1966	12,576	12,700	65.7	54.3
1967	13,912	14,053	72.0	59.8
1968	14,104	14,276	72.4	60.5
1969	13,860	14,025	70.4	59.7
1970 I	3,342	3,390	16.9	14.4
II	3,421	3,429	17.0	14.5
III	3,450	3,589	17.8	15.2
IV	4,287	4,254	21.0	17.9
Total	14,500	14,662	72.7	62.0
1971 I	4,010	4,071	20.0	17.1
II	3,987	3,939	19.3	16.6
III	3,724	3,964	19.4	16.8
IV	4,094	4,152	20.3	17.7
Total	15,815	16,126	79.0	68.2
1972 I	3,710	3,867	18.8	16.6
II	3,623	3,667	17.8	15.5
III	3,237	3,431	16.6	14.7
IV	3,671	3,748	18.1	16.1
Total	14,241	14,713	71.3	62.9
1973 I	3,385	3,445	16.6	14.9
II	3,328	3,359	16.2	14.5
III	2,869	2,998	14.4	13.1
IV	3,461	3,496	16.7	15.1
Total	13,043	13,298	63.9	57.6
1974 I	3,481	3,602	17.2	15.7
II	3,670	3,734	17.8	16.0
III	3,381	3,515	16.8	15.0
IV	3,568	3,641	17.3	15.5
Total	14,100	14,492	69.1	62.2
1975 I	3,142	3,259	15.5	14.0
II	2,991	3,039	14.4	13.2
III	2,556	2,647	12.5	11.5
IV	2,897	2,908	13.7	12.5
Total	11,586	11,853	56.1	51.2
1976 I	2,958	3,050	14.3	13.1
II	2,847	2,890	13.6	12.4
III	3,014	3,075	14.5	13.3
IV	3,669	3,682	17.2	15.7
Total	12,488	12,697	59.6	54.5
1977 I	3,293	3,370	15.7	14.4
II	3,186	3,206	14.9	13.7

Table 2—Corn Belt hog feeding¹Selected costs at current rates²

Purchased during Marketed during	June 76 Oct. 76	July Nov.	Aug. Dec.	Sept. Jan. 77	Oct. Feb.	Nov. Mar.	Dec. Apr.	Jan. 77 May	Feb. June	Mar. July	Apr. Aug.	May Sept.	June Oct.	July Nov.	Aug. Dec.	Sept. Jan. 78
	Dollars per head	Dollars per head	Dollars per head	Dollars per head	Dollars per head	Dollars per head	Dollars per head	Dollars per head	Dollars per head	Dollars per head	Dollars per head	Dollars per head	Dollars per head	Dollars per head	Dollars per head	Dollars per head
Expenses:																
40 lb. feeder pig	38.85	30.45	31.02	27.69	21.75	21.17	24.04	23.84	33.24	38.58	41.49	40.91	35.18	36.90	39.84	37.46
Corn (11 bu.)	30.25	31.13	28.82	28.82	25.30	22.22	24.86	25.74	25.63	25.63	25.52	24.31	23.10	21.12	17.82	17.16
Protein supplement (130 lb.)	17.16	18.07	16.51	17.42	15.92	16.51	18.00	18.07	17.94	19.37	20.74	21.12	20.28	17.10	15.92	15.54
Labor & management (1.3 hrs.)	6.71	6.71	6.21	6.21	6.21	6.40	6.40	6.40	6.66	6.66	6.66	6.97	6.97	6.97	6.71	6.71
Vet medicine ³	1.56	1.56	1.56	1.56	1.55	1.55	1.56	1.60	1.61	1.62	1.64	1.65	1.64	1.64	1.63	1.62
Interest on purchase (4 mo.)	1.17	.91	.93	.83	.65	.64	.72	.72	1.00	1.16	1.24	1.23	1.06	1.11	1.20	1.12
Power, equip, fuel, shelter, depreciation ³	3.78	3.80	3.78	3.78	3.76	3.76	3.78	3.88	3.91	3.95	3.99	4.00	3.99	3.97	3.95	3.95
Death loss (4% of purchase)	1.55	1.22	1.24	1.11	.87	.85	.96	.95	1.33	1.54	1.66	1.64	1.41	1.48	1.59	1.50
Transportation (100 miles) .....	.48	.48	.48	.48	.48	.48	.48	.48	.48	.48	.48	.48	.48	.48	.48	.48
Marketing expenses	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Miscellaneous & indirect costs ³ .....	.39	.39	.39	.39	.38	.38	.39	.40	.40	.40	.41	.41	.41	.41	.40	.40
Total	103.04	95.86	92.08	89.43	78.01	75.10	82.33	83.22	93.34	100.53	104.97	103.86	95.66	92.32	90.68	87.08
Selling price/cwt. required to cover feed and feeder costs (220 lb.)	39.21	36.20	34.70	33.60	28.62	27.23	30.41	30.75	34.91	37.99	39.89	39.25	35.71	34.15	33.45	31.89
Selling price/cwt. required to cover all costs (220 lb.)	46.84	43.57	41.85	40.65	35.46	34.14	37.42	37.83	42.43	45.70	47.71	47.21	43.48	41.96	41.22	39.58
Feed cost per 100 lb. gain	26.34	27.33	25.18	25.69	22.90	21.52	23.81	24.34	24.21	25.00	25.70	25.24	24.10	21.23	18.74	18.17
Barrows and gilts⁷ markets/cwt.	32.66	32.05	38.05	39.52	40.18	37.53	36.97	41.79	43.86	45.76	44.38	41.40				
Net margin/cwt.	-14.18	-11.52	-3.80	-1.13	+4.72	+3.39	-0.45	+3.96	+1.43	+0.06	-3.33	-5.89				
Prices:																
40 lb. feeder pig (So. Missouri)	38.85	30.45	31.02	27.69	21.75	21.17	24.04	23.84	33.24	38.58	41.49	40.91	35.18	36.90	39.84	37.46
Corn ⁸ (bu.)	2.75	2.83	2.62	2.62	2.30	2.02	2.26	2.34	2.33	2.33	2.32	2.21	2.10	1.92	1.62	1.56
38-42% protein supp. ⁹ \$/cwt.	13.20	13.90	12.70	13.40	12.25	12.70	13.85	13.90	13.80	14.90	15.95	16.25	15.60	13.15	12.25	11.95
Labor and management ¹⁰ \$/hr.	5.16	5.16	4.78	4.78	4.78	4.92	4.92	4.92	5.12	5.12	5.12	5.36	5.36	5.36	5.16	5.16
Interest rate (annual)	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
Transportation rate/cwt. (100 miles) ¹¹ .....	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22
Marketing expenses ¹²	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Index of prices paid by farmers (1910=100)	657	660	657	657	652	652	657	673	679	685	692	695	692	690	686	685

¹ Although a majority of hog feeding operations in the Corn Belt are from farrow to finish, relative fattening expenses will be similar. ² Represents only what expenses would be if all selected items were paid for during the period indicated. The feed rations and expense items do not necessarily coincide with the experience of individual feeders. For individual use, adjust expenses and prices for management, production level, and locality of operation. ³ Adjusted monthly by the index of prices paid by farmers for commodities, services, interest, taxes and wage rates. ⁴ Average price received by farmers in Iowa and Illinois. ⁵ Average prices paid by farmers in Iowa and Illinois. ⁶ Assumes an owner-operator receiving twice the farm labor rate. ⁷ Converted to cents/cwt. from cents/mile for a 44,000 pound haul. ⁸ Yardage plus commission fees at a midwest terminal market.

CATTLE

Cattle feeders have responded to this summer's lower corn prices by increasing the number of cattle placed on feed. Placements in the 7 States preparing monthly cattle on feed estimates were up 28 percent in July and 7 percent in August from the year-earlier level. With fed cattle marketings during this 2-month period a little below a year ago, the inventory of cattle on feed September 1, 1977, rose to 4 percent above a year earlier.

This buildup in the number of cattle on feed suggests larger supplies of fed cattle over the next several months. This large supply of fed cattle, combined with a continuing relatively heavy slaughter of cows and steers and heifers off grass, will yield a large supply of beef into early 1978. Forage supplies this fall and winter, however, will impact heavily on cow and nonfed steer and heifer slaughter.

Cattle Feeding To Continue To Rise

This year's expected large feed grain crop will provide ample supplies of feed at prices considerably below those of the past 3 or 4 years. This is expected to be a big impetus to an expanding cattle feeding industry. The beef steer-corn ratio (Omaha basis) rose to 21.5 to 1 during July and to over 24 to 1 in August. This was the first time this ratio had exceeded 20 to 1 since July 1973, and it compared with a ratio of about 14 to 1 last summer. This ratio is likely to remain in the low- to mid-20 to 1 range during the remainder of this year and into 1978. Thus, with feed prices low in relation to fed cattle prices, placements of cattle on feed likely will continue to increase in coming months, further increasing feedlot inventories.

The increased placements would yield year-to-year increases in fed cattle marketings. Fed cattle marketings are expected to be above the year-earlier level and account for about 60 percent of cattle slaughter during the last half of 1977. For the year, fed cattle marketings could be 2 to 3 percent above the 1976 level and account for about 61 percent of total commercial cattle slaughter. This compares with just under 60 percent in 1976 and about 52 percent in 1975. This trend is expected to continue into 1978 with fed cattle slaughter accounting for an even larger share of total slaughter than in 1977.

Slaughter and Production Declining, But Still Relatively High

Although below the very high levels of last summer, commercial slaughter and production this summer was relatively large. Poor grazing conditions in many areas forced a large number of cattle

to market this year that probably would not have been shipped if grazing conditions had been better. Therefore, the nonfed steer and heifer and cow segment of the slaughter held at relatively high levels this summer. This led to a third quarter beef production that was about 4 percent below last summer's 6,618 million pounds.

Grazing conditions, harvested forage supplies, and the weather will have a big impact on the level of beef production over the next several months. Beef production this fall is expected to be 2 to 3 percent below last year's level. An increase in fed beef production is not expected to offset the decline in nonfed beef production. The buildup in feedlot inventories this spring and summer should support a year-to-year increase in fed cattle slaughter this fall. With adequate forage supplies and some strengthening in feeder cattle prices, cow slaughter likely will decline by 12 to 16 percent from last fall's level. A similar reduction in nonfed steer and heifer slaughter could also occur.

Beef production will continue at a relatively high level in early 1978. The increased placements of cattle on feed this summer, and the expectation that they will continue to rise, will support increases in fed cattle slaughter into 1978. Fed cattle slaughter during the first quarter of next year will probably be slightly above the year-earlier level. Percentage wise, year-to-year increases during the second quarter could exceed those of the first quarter.

A substantial reduction in cow slaughter could occur during the first half of 1978. Combined with a reduction in nonfed steer and heifer slaughter, this could result in a sizable decline in nonfed beef production.

Total commercial beef production during the first quarter of 1978 likely will be only slightly below the year-earlier level. Larger declines in beef production are anticipated for the spring when production could be down 3 to 4 percent. Good spring grazing conditions and a sharp reduction in nonfed steer and heifer slaughter will be required to accomplish this rate of reduction in beef production.

Reduced hay stocks in some areas could contribute to a continued large liquidation of the cattle herd during the next 6 months, particularly if the weather is severely cold like last winter. A dry fall would also reduce the amount of grazing available, especially in areas where annual winter grazing is seeded. If poor grazing conditions do exist this fall and winter, beef production would be higher than expected with favorable weather conditions.

Fed Cattle Prices To Remain Under Pressure

Beef production is expected to continue at a level through this winter that will prevent much rise in

Federally inspected cattle slaughter

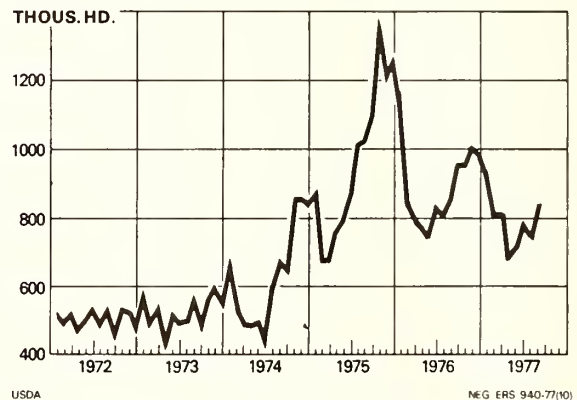
Week ended 1977 ¹	Cattle		Steers		Cows	
	1976	1977	1976	1977	1976	1977
	Thou.	Thou.	Thou.	Thou.	Thou.	Thou.
Jan. 8	818	731	313	322	251	192
15	837	763	328	344	253	188
22	795	803	327	346	225	212
29	755	800	301	333	222	210
Feb. 5	788	776	336	350	210	188
12	795	789	343	356	189	195
19	717	754	308	333	184	187
26	730	718	318	329	178	172
Mar. 5	742	731	330	339	166	173
12	778	735	362	346	154	168
19	775	726	356	342	168	162
26	765	725	356	342	159	158
Apr. 2	751	714	358	354	146	144
Apr. 9	732	695	331	342	157	135
16	725	700	334	343	157	147
23	644	725	282	354	155	155
30	644	738	275	357	168	162
May 7	687	726	315	358	157	151
14	735	715	345	345	163	152
21	765	719	353	348	179	160
28	766	742	354	365	172	155
June 4	672	648	314	330	143	133
11	762	780	354	385	180	174
18	727	775	345	382	169	174
25	711	737	321	372	173	147
July 2	737	769	356	380	167	171
July 9	644	644	310	317	141	138
16	767	783	353	370	196	185
23	759	727	360	345	178	162
30	739	746	350	355	166	169
Aug. 6	744	722	359	349	164	160
13	780	760	365	368	182	160
20	785	787	363	366	184	181
27	776	781	351	358	188	182
Sept. 3	778	762	339	351	199	167
Sept. 10	700	687	316	318	165	147
17	826	791	368	343	204	187
24	814	787	359		217	
Oct. 1	786	769	347		197	
Oct. 8	775		353		181	
15	794		348		200	
22	832		344		230	
29	758		309		212	
Nov. 5	756		307		213	
12	784		321		231	
19	742		297		222	
26	609		264		164	
Dec. 3	747		300		218	
Dec. 10	793		328		225	
17	730		296		211	
24	585		248		162	
31	615		277		157	

¹ Corresponding date: 1976, January 10.

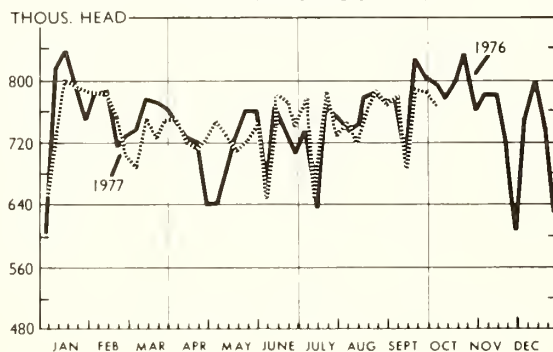
Utility cow prices per 100 pounds, Omaha

Month	1972	1973	1974	1975	1976	1977
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
January	22.61	26.67	31.45	16.82	23.26	22.95
February ...	23.80	31.43	32.65	18.18	25.90	23.88
March	24.73	33.90	31.76	19.45	27.45	26.67
April	24.70	33.59	30.50	21.67	30.72	27.63
May	25.51	34.26	27.67	23.55	30.24	26.57
June	26.00	33.09	26.39	23.32	27.47	25.64
July	26.22	34.22	24.22	22.00	25.80	25.23
August	26.18	37.56	24.54	21.29	25.10	25.38
September ..	26.57	34.58	22.56	22.45	22.90	26.12
October	26.19	33.68	19.68	22.01	22.72	
November ...	24.98	30.71	17.62	20.73	20.59	
December ...	25.02	30.14	17.67	21.64	21.60	
Average ...	25.21	32.82	25.56	21.09	25.31	

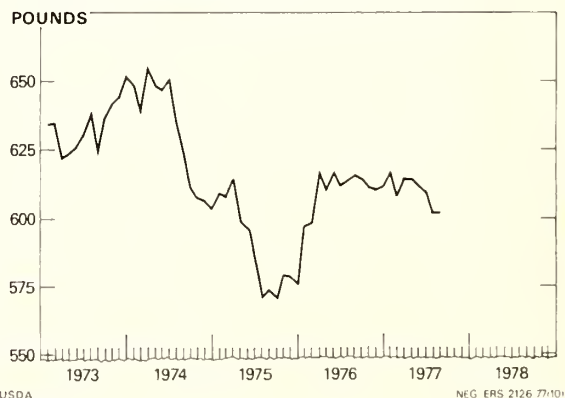
COMMERCIAL COW SLAUGHTER



F.I. CATTLE SLAUGHTER



AVERAGE DRESSED WEIGHT OF CATTLE



fed cattle prices. The larger supplies of fed cattle coming from the expanding feeding activity will account for much of this pressure. However, the large inventory of steers and heifers weighing over 500 pounds will also continue to support a relatively large nonfed slaughter.

Choice 900-1,100 pound steers at Omaha are expected to trade in the high \$30's to low \$40's through the winter. A fall quarter average in the \$40- to \$42-range seems likely unless low forage supplies lead to less than the expected 12- to 15-percent reduction in nonfed slaughter.

The pricing pattern for fed cattle during the first quarter of 1978 is expected to be very similar to the fall quarter. More strength in the fed cattle market is anticipated next spring. Good spring grazing conditions and a substantial reduction in cow and nonfed steer and heifer slaughter could be the impetus to cause prices to rise. Choice steers at Omaha could average in the \$42- to \$44-range next spring.

Large supplies of pork and broilers will continue to provide competition for beef. Pork and broiler production is expected to be increasing in 1978 and this will temper price rises for beef.

Choice steer prices per 100 pounds, Omaha¹

Month	1972	1973	1974	1975	1976	1977
	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.
January	35.63	40.65	47.14	36.34	41.18	38.38
February ...	36.32	43.54	46.38	34.74	38.80	37.98
March	35.17	45.65	42.85	36.08	36.14	37.28
April	34.52	45.03	41.53	42.80	43.12	40.08
May	35.70	45.74	40.52	49.48	40.62	41.98
June	37.91	46.76	37.98	51.82	40.52	40.24
July	38.38	47.66	43.72	50.21	37.92	40.94
August	35.70	52.94	46.62	46.80	37.02	40.11
September ..	34.69	45.12	41.38	48.91	36.97	40.35
October	34.92	41.92	39.64	47.90	37.88	
November ...	33.59	40.14	37.72	45.23	39.15	
December ...	36.85	39.36	37.20	45.01	39.96	
Average	35.78	44.54	41.89	44.61	39.11	

¹ 900-1,100 lb.

Feeder Cattle Prices To Rise

A large supply of yearling feeders will keep these prices under some pressure for a few more months. They may strengthen some later this fall, however, as the large corn crop continues to stimulate placements of cattle on feed. Choice 600 to 700

Table 3—Beef supplies and prices

		Commercial cattle slaughter ¹						Average dressed weight	Com- mercial produc- tion	Per capita con- sump- tion ^{2 3}	Retail	Prices		
		Steers and heifers			Cows	Bulls and stags	Total					Choice Feeders 600-700 lb. Kan- sas City	Choice Steers Omaha 900- 1100 lb.	Farm
		Fed	Non-fed	Total										
		1,000 head						Lb.	Mil. lb.	Lb.	Cents/lb.	\$/cwt.		
1973:	I	6,770	146	6,916	1,590	156	8,662	624	5,393	28.0	129.2	50.77	43.28	40.80
	II	6,470	86	6,556	1,434	165	8,155	621	5,049	26.2	135.8	53.74	45.84	43.43
	III	6,080	204	6,284	1,533	180	7,997	626	4,997	26.8	141.8	57.98	48.57	47.67
	IV	6,570	437	7,007	1,691	175	8,873	638	5,649	28.6	135.1	50.20	40.47	40.00
Year		25,890	873	26,763	6,248	676	33,687	628	21,088	109.6	135.5	53.17	44.54	42.80
1974:	I	6,100	560	6,660	1,689	165	8,514	638	5,434	28.3	145.1	47.78	45.46	42.83
	II	6,430	817	7,247	1,391	179	8,817	639	5,638	28.8	134.5	39.80	40.01	36.37
	III	5,680	1,526	7,206	1,913	244	9,363	614	5,751	29.4	141.0	34.64	43.91	34.97
	IV	5,670	1,695	7,365	2,521	232	10,118	595	6,021	30.3	134.5	29.31	38.19	28.83
Year		23,880	4,598	28,478	7,514	820	36,812	621	22,844	116.8	138.8	37.88	41.89	35.60
1975:	I	5,690	1,611	7,301	2,224	208	9,733	600	5,842	30.3	129.6	27.39	35.72	27.33
	II	5,200	1,658	6,858	2,419	273	9,550	586	5,593	28.4	146.5	34.67	48.03	34.57
	III	5,190	1,913	7,103	3,124	312	10,539	564	5,942	30.2	156.4	35.54	48.64	33.83
	IV	5,130	1,865	6,995	3,790	304	11,089	568	6,296	31.2	151.4	38.06	46.05	33.07
Year		21,210	7,047	28,257	11,557	1,097	40,911	579	23,673	120.1	146.0	33.91	44.61	32.30
1976:	I	6,550	1,375	7,925	2,748	240	10,913	595	6,492	32.8	142.1	39.19	38.71	33.37
	II	6,150	1,429	7,579	2,330	261	10,170	604	6,145	31.3	141.5	43.89	41.42	37.17
	III	6,430	1,605	8,035	2,612	262	10,909	607	6,618	33.4	136.1	38.10	37.30	32.97
	IV	5,910	1,588	7,498	2,929	235	10,662	601	6,412	31.7	136.0	36.40	39.00	31.93
Year		25,040	5,997	31,037	10,619	998	42,654	602	25,667	129.2	138.9	39.40	39.11	33.70
1977:	I	6,690	1,027	7,717	2,532	212	10,461	601	6,285	31.5	135.1	37.77	37.88	33.07
	II	6,420	1,386	7,806	2,163	228	10,197	604	6,162	31.1	136.6	41.10	40.77	35.03
	III	6,400	1,585	7,985	2,400	245	10,630	595	6,330	31.8	139.5	41.16	40.47	34.80
	IV													
Year														

¹ Classes estimated. ² Total, including farm production. ³ Revisions for 1976 due to change in conversion from product to carcass weight of trade data.

Steer prices, costs, and net margins¹

Year	Steers Omaha	Feed & Feeder	Break-even	Net margin
\$ per cwt.				
1975				
Jan.	36.34	39.63	45.27	-8.93
Feb.	34.74	42.39	48.09	-13.35
Mar.	36.08	38.18	43.69	-7.61
Apr.	42.80	39.74	45.37	-2.57
May	49.48	37.54	43.11	+6.37
June	51.82	37.53	43.09	+8.73
July	50.21	35.36	40.82	+9.39
Aug.	46.80	34.43	39.91	+6.89
Sept.	48.91	34.57	40.10	+8.81
Oct.	47.90	36.31	41.77	+6.13
Nov.	45.23	38.31	43.93	+1.30
Dec.	45.01	38.97	44.64	+3.7
1976				
Jan.	41.18	37.83	43.50	-2.32
Feb.	38.80	39.05	44.67	-5.87
Mar.	36.14	40.04	45.79	-9.65
Apr.	43.12	39.39	45.30	-2.18
May	40.62	38.15	44.01	-3.39
June	40.52	38.12	43.98	-3.46
July	37.92	38.34	44.17	-6.25
Aug.	37.02	40.40	46.40	-9.38
Sept.	36.97	39.94	45.94	-8.97
Oct.	37.88	42.53	48.68	-10.80
Nov.	39.15	43.28	49.42	-10.27
Dec.	39.96	43.37	49.49	-9.53
1977				
Jan.	38.38	40.85	47.82	-9.44
Feb.	37.98	40.46	46.35	-8.37
Mar.	37.28	39.25	45.06	-7.78
Apr.	40.08	37.86	43.66	-3.58
May	41.98	36.24	42.07	-0.09
June	40.24	37.73	43.58	-3.34
July	40.94	38.50	44.41	-3.47
Aug.	40.11	39.28	45.31	-5.20
Sept.	40.35	40.01	46.10	-5.75
Oct.		41.53	47.72	
Nov.		40.77	47.04	
Dec.		38.88	45.09	

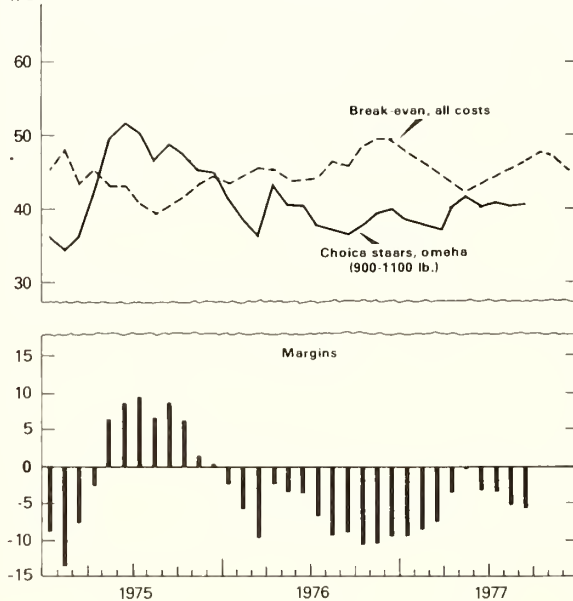
¹ Selling price required to cover costs of feeding 600 lb. feeder steer to 1,050 lb. slaughter in Corn Belt.

7 States Cattle on Feed, Placements, and Marketings

Year	On feed	Change, previous year	Net placements	Change, previous year	Marketings	Change, previous year
	1,000 head	Percent	1,000 head	Percent	1,000 head	Percent
1975						
Jan.	6,369	-31.9	1,053	-42.7	1,372	-11.9
Feb.	6,050	-37.2	747	-21.9	1,316	-1.8
Mar.	5,481	-40.7	1,448	+27.9	1,331	-15.6
Apr.	5,598	-36.4	1,266	+7.6	1,275	-21.7
May	5,589	-33.1	1,424	+31.2	1,172	-24.4
June	5,841	-25.9	1,313	+63.9	1,148	-25.5
July	6,006	-16.0	1,090	-10.5	1,164	-14.2
Aug.	5,932	-15.3	1,230	+7.0	1,213	-6.8
Sept.	5,949	-13.2	2,005	+92.6	1,298	-2.0
Oct.	6,656	+1.3	2,233	+28.3	1,307	-13.8
Nov.	7,582	+11.6	1,864	+59.6	1,190	-11.1
Dec.	8,256	+24.6	1,483	+35.9	1,202	-10.8
1976						
Jan.	8,537	+34.0	1,282	+21.7	1,462	+6.6
Feb.	8,357	+38.1	1,293	+73.1	1,529	+16.2
Mar.	8,121	+48.2	1,248	-13.8	1,841	+38.3
Apr.	7,528	+34.5	1,497	+18.2	1,512	+18.6
May	7,513	+34.4	1,226	-13.9	1,470	+25.4
June	7,269	+24.4	1,278	-2.7	1,468	+27.9
July	7,079	+17.7	1,113	+2.1	1,521	+30.7
Aug.	6,671	+12.5	1,356	+10.2	1,589	+31.0
Sept.	6,438	+8.2	1,618	-19.3	1,478	+13.9
Oct.	6,578	-1.2	2,215	-0.8	1,491	+14.1
Nov.	7,302	-3.7	2,041	+9.5	1,343	+12.9
Dec.	8,000	-3.1	1,686	+13.7	1,473	+22.5
1977						
Jan.	8,213	-3.8	1,262	-1.6	1,602	+9.6
Feb.	7,873	-5.8	1,250	-3.3	1,567	+2.5
Mar.	7,556	-7.0	1,414	+13.3	1,690	-8.2
Apr.	7,280	-3.3	1,480	-1.1	1,564	+3.4
May	7,196	-4.2	1,346	+9.8	1,489	+1.3
June	7,053	-3.0	1,347	+5.4	1,548	+5.4
July	6,872	-2.9	1,436	+29.0	1,442	-5.2
Aug.	6,866	+2.9	1,445	+6.6	1,593	+0.3
Sept.	6,718	+4.3				
Oct.						
Nov.						
Dec.						

STEER PRICES, COSTS, AND NET MARGINS

\$/CWT.

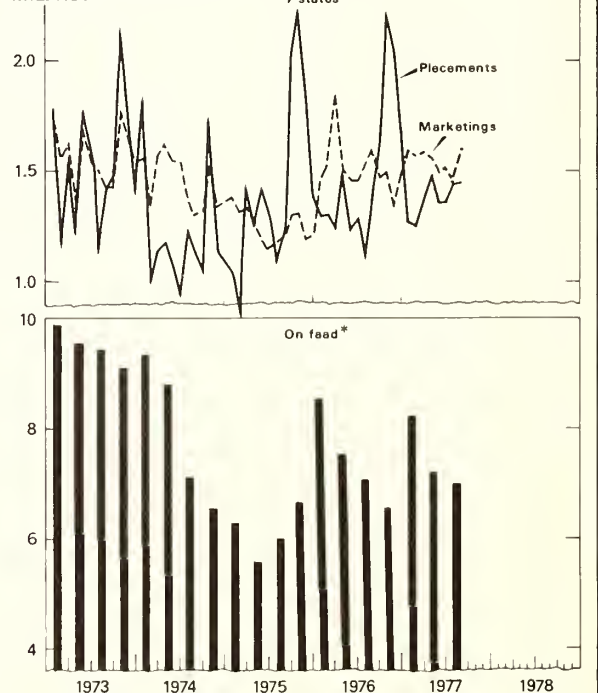


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CATTLE ON FEED, PLACEMENTS, AND MARKETINGS

MIL. HD.



*ON FEED BEGINNING OF QUARTER

USDA

NEG ERS 2031 77 (10)

Veal supplies and prices

	Commercial			Per capita ¹	Prices		
	Slaughter	Av. dr. wt.	Production		Retail	Choice vealers So. St. Paul	Farm
	1,000 head	lb.	Mil. lb.	lb.	Cents per lb.	\$/cwt.	\$/cwt.
1972							
I ...	885	133	118	.6	147.0	51.07	40.90
II ...	699	149	104	.5	152.3	55.57	42.80
III ...	718	146	105	.5	157.1	57.65	45.23
IV ...	751	136	102	.6	159.2	56.02	46.83
Year ..	3,053	141	429	2.2	153.9	55.09	44.70
1973							
I ...	685	140	96	.5	169.4	63.00	53.63
II ...	489	155	76	.4	181.0	63.43	58.00
III ...	475	154	73	.4	186.8	67.68	62.87
IV ...	600	133	80	.5	189.5	62.21	53.53
Year ..	2,249	145	325	1.8	181.7	64.08	56.60
1974							
I ...	614	135	83	.5	197.3	63.17	52.33
II ...	585	144	84	.4	193.9	54.38	42.50
III ...	762	159	121	.6	194.4	43.96	33.47
IV ...	1,026	150	154	.8	190.7	37.02	26.13
Year ..	2,987	148	442	2.3	194.1	49.63	35.20
1975							
I ...	1,068	155	166	.9	183.4	38.68	24.40
II ...	1,137	160	182	.9	182.1	42.18	28.37
III ...	1,449	160	232	1.2	182.1	37.56	26.67
IV ...	1,555	159	247	1.2	177.0	43.33	28.30
Year ..	5,209	159	827	4.2	181.1	40.44	27.20
1976							
I ...	1,370	150	206	1.1	173.8	50.84	33.13
II ...	1,195	149	178	.8	174.3	44.01	38.23
III ...	1,349	152	205	1.0	174.9	38.62	34.00
IV ...	1,436	156	224	1.1	170.1	47.24	32.63
Year ..	5,350	152	813	4.0	173.3	45.18	34.10
1977							
I ...	1,442	141	205	1.0	177.7	54.75	35.30
II ...	1,306	142	186	.9	178.9	53.13	37.53
III ...	1,375	149	205	1.0	181.5	44.90	37.33
IV ...							
Year ..							

¹ Total, including farm production.

Feeder cattle prices per 100 pounds, Kansas City

Month	Choice feeder steers 600-700 lbs.			Choice feeder steer calves ¹		
	1975	1976	1977	1975	1976	1977
	Dol.					
Jan.	26.45	37.46	36.49	25.55	37.47	37.99
Feb.	26.96	40.42	37.86	26.29	41.40	41.69
Mar.	28.75	39.69	38.95	29.14	44.01	44.36
Apr.	31.69	44.62	41.81	31.45	47.01	45.72
May	35.50	44.21	41.72	34.66	47.58	45.20
June	36.81	42.83	39.90	35.82	44.81	42.46
July	34.70	39.18	40.64	32.58	40.64	43.14
Aug.	34.34	38.94	41.99	31.70	41.13	45.27
Sept.	37.59	36.18	40.85	35.15	38.18	46.06
Oct.	38.09	36.72		36.04	39.81	
Nov.	38.26	36.26		36.26	38.46	
Dec.	37.83	36.23		35.94	38.22	
Av.	33.91	39.40		32.55	41.56	

¹ 400-500 lbs.

Feeder steer prices consistent with break-even, given corn and fed steer prices¹

Corn (Farm price)	Choice steers, \$/cwt.					
	30	35	40	45	50	55
\$/bu.	Feeder steers, \$/cwt.					
1.50	20	29	38	47	55	64
1.75	19	27	36	45	54	62
2.00	17	25	34	43	52	60
2.25	15	24	32	41	50	59
2.50	13	22	30	39	48	57
2.75	11	20	29	37	46	55
3.00	9	18	27	35	44	53
3.25	7	16	25	34	42	51

¹ Assuming all other costs at September 1977 levels. (See corn belt cattle feeding table).

COMMERCIAL CALF SLAUGHTER

THOUS. HD.

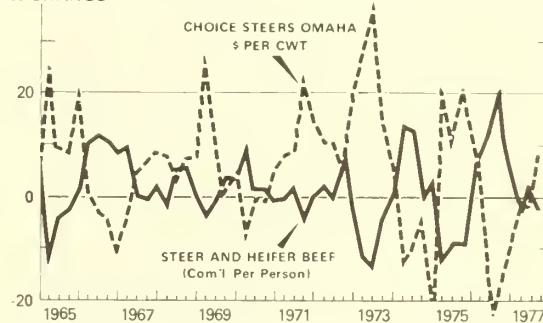


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CHANGES IN BEEF PRICES AND PRODUCTION

% CHANGE



PERCENTAGE CHANGE FROM PREVIOUS YEAR

USDA

NEG. ERS 2473 77-11

pound feeder steers at Kansas City will probably average in the \$43- to \$45-range this fall. With this year's smaller calf crop and a continued high level of calf slaughter, the supply of lighter weight feeder cattle should be declining. This, along with lower feed prices, could help lighter weight feeder cattle trade at a premium to the heavier animals.

Feeder cattle prices likely will continue to rise during the winter as the supply is further reduced through slaughter and increased placements on feed. Fed cattle prices, however, will temper feeder cattle price increases.

The real strength in feeder cattle prices could come next spring if grazing conditions are good. At this time, the supply of feeder cattle could have been substantially reduced through continuing high levels of calf and nonfed steer and heifer slaughter and a large placement in feedlots. Also, next year's calf crop is expected to be smaller than this year's. An improving fed cattle market could also help strengthen feeder cattle prices. This could give a spring quarter yearling feeder cattle price that would average in the upper \$40's.

Some large regional difference in feeder cattle prices probably will continue for the next several months. Attempts to adjust cattle inventories to available forage supplies will be a big factor causing these differences to remain. Regional price differences could become less pronounced next spring if new pasture growth becomes plentiful.

Liquidation of The Cow Herd Likely To End in 1978

The cow herd has continued to be liquidated during 1977. Slaughter data suggest that the rate of liquidation this summer has been substantial. Poor grazing conditions and continuing depressed feeder cattle prices have been significant factors contributing to the liquidation. A high rate of liquidation could continue this fall and winter if forage supplies fail to meet needs.

Provided grazing conditions are good next spring, it is anticipated that feeder cattle prices will have increased enough to halt liquidation of the cow herd. The inventory of cows that have calved is expected to show a year-to-year decline on January 1, 1978, but a slight increase on January 1, 1979, is possible.

This will not, however, stop the decline in the inventory of all cattle and calves during this period. Year-to-year declines in the beginning of the year inventory of all cattle and calves will likely continue through 1979.

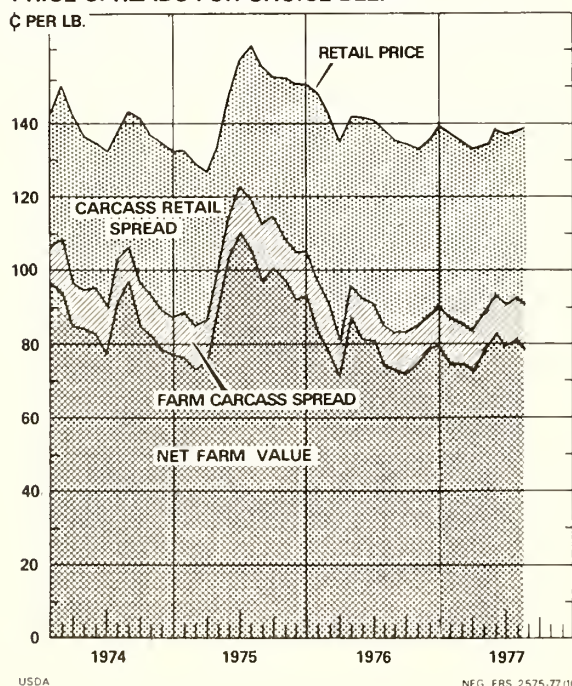
MEAT CONSUMPTION AND PRICES

Retail beef prices should continue to increase for the remainder of 1977 and into the first half of 1978 as beef production and consumption decline from their summer levels. October-December beef production may be down slightly from the summer quarter and could be 2 to 3 percent below last fall. If cattle slaughter rates meet expectations, beef production during the first half of 1978 could be as much as 2-3 percent below the first half of 1977. The reduction in beef supplies will be in the lower quality leaner cuts as a result of the decrease in nonfed cattle and cow slaughter.

Retail pork prices are expected to decrease from their third quarter peak and should continue down during the first half of 1978 as a result of increasing pork supplies. Pork production is expected to increase by 14-15 percent from summer to fall, and production during the first 6 months of 1978 could exceed 1977 levels by 10-11 percent.

October-December total red meat production will probably be below last year's level but could be seasonally larger than the third quarter. Seasonal increases in pork production will probably boost commercial red meat production in the last 3 months of this year to near or above the first quarter's 9.9 billion pounds. Despite a seasonal decline in broiler supplies, combined red meat and poultry production this fall will be above the third-quarter level and will result in the highest quarterly production of the year. However, it will still be below last fall's record.

PRICE SPREADS FOR CHOICE BEEF



Commercial production of red meat for July and August and federally inspected slaughter data for September point to a possible 9.7 billion pounds of commercial red meat production for the third quarter of 1977. This would be a 2-percent reduction from last summer and up slightly from the spring quarter, as seasonal increases in beef and veal production from the spring to the summer more than offset the reduction in pork production. Combined commercial red meat and poultry production for the third quarter will be near 12.8 billion pounds, down about 1 percent from last summer but up almost 4 percent from the spring quarter as poultry supplies continue large.

The wholesale dressed meat price of Canner and Cutter cow beef at Midwest markets increased by almost 14 percent from January to March, while Choice steer beef prices decreased by 4 percent, narrowing the price difference between these two grades of meat to a little more than \$2 per 100 pounds. This reflected the change in beef supplies as a result of the different composition of cattle slaughter. Although nonfed steer and heifer and cow slaughter were still high, they were below first quarter 1976 levels. Fed cattle slaughter was higher. The pattern of increasing cow beef prices and steady to slightly higher Choice beef prices was expected to continue for the remainder of 1977. However, due to drought conditions and the resulting poor pastures this spring and summer, slaughter of nonfed cattle and cows was a little higher than expected, resulting in continued large supplies of nonfed beef. Since April, when it peaked, the price of wholesale cow beef has declined each month, while the price of steer beef has fluctuated in the low \$60's. The result has been an average price difference of \$11 per 100 pounds between cow beef and steer beef since May.

Imports of frozen boneless beef are running below last year's level and below the level allowed under the Meat Import Law. These imports are likely to increase during October-December. If cow slaughter increases seasonally this fall, as it usually does, then the increase in cow beef prices that had been anticipated likely will not occur until 1978.

Meat Imports to Increase

Meat imports subject to the Meat Import Law were about 54 million pounds below last year's level in early September. About 40 percent of this reduction is due to reduced imports from Central American countries. The Dominican Republic has exported only 2 million pounds of its 15 million pound voluntary restraint entitlement, and Costa Rica, El Salvador, and Nicaragua are also below their restraint levels. But the largest shortfall is

from Australia, the largest exporter of meat into the United States. Under the Meat Import Law, Australia's voluntary restraint entitlement is 653 million pounds for 1977. As of September 3 it had only exported 404 million pounds, about 60 percent of its allotment. The result is that the remaining 40 percent of Australia's exports (249 million pounds) likely will arrive in the United States during the last 4 months of 1977.

This uneven distribution of imports is partially the result of the Australian Meat Board allocation system and also of market conditions in the United States. The Australian Meat Board is basing export entitlements to ship beef into the United States on the amount of meat an exporter ships to countries other than the United States. This gave Australian meat exporters a strong incentive to ship meat to the Soviet Union and other markets, especially during the early part of this year. Also, the relatively low cow meat prices in the United States and the general expectation that they would improve as the year progressed encouraged exporters to ship later in the year. In order to meet their restraint level, the Australian Meat Board has advised exporters that any unused entitlement to ship to the United States in 1977 will be canceled and subtracted from their 1978 entitlements as penalty for not filling the United States restraint level. The influx of this beef during the last part of 1977 does not imply that it will all be consumed during this period. Most of the imported meat is frozen boneless and can be stored much longer than fresh meat.

Demand to Continue Strong

The general level of economic activity is continuing to expand but at a slower rate of growth than earlier expected. Real Gross National Product grew at an annual rate averaging close to 7 percent during the first half of 1977. Real growth during the third quarter will probably be lower averaging 5 to 6 percent and the fourth quarter could be even lower. While this slower growth will be a moderating influence, the demand for meat is being stimulated by a reduction in taxes and an increase in Social Security payments.

Starting in July there was an increase in the standard deduction for Federal income tax and a job credit allowance. There was also a 5.9 percent cost of living increase in Social Security benefits. The estimated impact of these measures on real personal consumption expenditures during the third quarter is a 3½ billion dollar increase. Increases of this kind in after-tax income impact directly on consumers' ability to purchase meat and meat products.

Table 4—Beef and pork prices and price spreads

Date	Retail price per pound ¹	Carcass value ²	Gross farm value ³	Byproduct allowance ⁴	Net farm value ⁵	Farm-retail spread			Farmers' share
						Total	Carcass-retail	Farm-carcass	
	Cents					Percent			
	Beef, Choice grade								
1971	104.3	75.7	72.3	4.5	67.8	36.5	28.6	7.9	65
1972	113.8	80.1	79.8	7.4	72.4	41.4	33.7	7.7	64
1973	135.5	98.1	100.0	10.1	89.9	45.6	37.4	8.2	66
1974	138.8	97.4	93.7	7.6	86.1	52.7	41.4	11.3	62
1975	146.0	105.5	99.9	7.0	92.9	53.1	40.5	12.6	64
1976	138.9	88.6	86.3	8.4	77.9	61.0	50.3	10.7	56
1973									
I	129.2	95.2	96.6	9.3	87.3	41.9	34.0	7.9	68
II	135.8	100.2	102.7	10.0	92.7	43.1	35.6	7.5	68
III	141.8	104.9	110.4	11.6	98.8	43.0	36.9	6.1	70
IV	135.1	92.1	90.2	9.5	80.7	54.4	42.9	11.5	60
1974									
I	145.1	103.9	101.5	9.4	92.1	53.0	41.2	11.8	63
II	134.5	93.6	89.0	7.3	81.7	52.8	40.9	11.9	61
III	141.0	102.1	99.1	7.8	91.3	49.7	38.9	10.8	65
IV	134.5	90.2	85.4	6.1	79.3	55.2	44.3	10.9	59
1975									
I	129.6	86.6	80.3	5.1	75.2	54.4	43.0	11.4	58
II	146.5	113.4	108.4	7.1	101.3	45.2	33.1	12.1	69
III	156.4	115.4	108.8	7.9	100.9	55.5	41.0	14.5	65
IV	151.4	106.5	102.2	7.9	94.3	57.1	44.9	12.2	62
1976									
I	142.1	89.8	85.3	7.6	77.7	64.4	52.3	12.1	55
II	141.5	93.0	91.9	8.8	83.1	58.4	48.5	9.9	59
III	136.1	83.8	82.1	9.0	73.1	63.0	52.3	10.7	54
IV	136.0	88.0	85.8	8.0	77.8	58.2	48.0	10.2	57
1977									
Jan.	137.5	87.1	83.9	8.8	75.1	62.4	50.4	12.0	55
Feb.	134.6	85.6	83.6	8.8	74.8	59.8	49.0	10.8	56
Mar.	133.2	83.3	82.4	9.3	73.1	60.1	49.9	10.2	55
Apr.	134.0	88.1	88.8	10.2	78.6	55.4	45.9	9.5	59
May	138.4	93.4	92.7	9.9	82.8	55.6	45.0	10.6	60
June	137.4	91.0	88.9	9.0	79.9	57.5	46.4	11.1	58
July	138.3	92.2	90.2	8.9	81.3	57.0	46.1	10.9	57
Aug.	139.2	90.6	87.8	8.7	79.1	60.1	48.6	11.5	57
Sept.									
Oct.									
Nov.									
Dec.									
	Pork								
1971	70.3	52.1	35.0	2.7	32.3	38.0	18.2	19.8	46
1972	83.2	65.3	51.2	3.5	47.7	35.5	17.9	17.6	57
1973	109.8	87.3	78.2	6.7	71.5	38.3	22.5	15.8	65
1974	108.2	77.4	68.0	7.2	60.8	47.4	30.8	16.6	56
1975	135.0	103.8	94.8	7.9	86.9	48.1	31.2	16.9	64
1976	134.3	93.6	84.4	6.0	78.4	55.9	40.7	15.2	58
1973									
I	98.1	80.1	68.4	4.9	63.5	34.6	18.0	16.6	65
II	103.1	79.4	70.8	6.0	64.8	38.3	23.7	14.6	63
III	121.8	101.7	94.8	8.7	86.1	35.7	20.1	15.6	71
IV	116.1	87.9	78.9	7.4	71.5	44.6	28.2	16.4	62
1974									
I	115.2	82.3	73.8	7.7	66.1	49.1	32.9	16.2	57
II	99.3	66.4	53.2	5.3	47.9	51.4	32.9	18.5	48
III	107.4	77.6	70.1	7.3	62.8	44.6	29.8	14.8	58
IV	111.0	83.5	75.0	8.4	66.6	44.4	27.5	16.9	60
1975									
I	114.4	85.7	75.6	7.3	68.3	46.1	28.7	17.4	60
II	123.1	96.7	88.9	7.4	81.5	41.6	26.4	15.2	66
III	149.2	118.9	114.0	9.7	104.3	44.9	30.3	14.6	70
IV	153.4	113.9	100.9	7.3	93.6	59.8	39.5	20.3	61
1976									
I	141.5	100.3	92.6	6.2	86.4	55.1	41.2	13.9	61
II	138.5	100.6	95.0	6.3	88.7	49.8	37.9	11.9	64
III	137.4	93.1	84.5	6.1	78.4	59.0	44.3	14.7	57
IV	119.8	80.2	65.5	5.0	60.5	59.3	39.6	19.7	50
1977									
Jan.	119.6	85.2	75.9	6.1	69.8	49.8	34.4	15.4	58
Feb.	121.1	85.0	77.2	6.3	70.9	50.2	36.1	14.1	59
Mar.	121.0	82.1	72.0	6.1	65.9	55.1	38.9	16.2	54
Apr.	118.9	80.2	70.9	6.4	64.5	54.4	38.7	15.7	54
May	120.9	86.8	80.4	6.6	73.8	47.1	34.1	13.0	61
June	125.7	90.2	84.5	6.5	78.0	47.7	35.5	12.2	62
July	132.1	92.5	88.2	6.2	82.0	50.1	39.6	10.5	62
Aug.	130.3	90.0	85.5	6.1	79.4	50.9	40.3	10.6	61
Sept.									
Oct.									
Nov.									
Dec.									

¹ Estimated weighted average price of retail cuts. ² For quantity equivalent to 1 lb. of retail cuts: Beef: 1.41 lb. of carcass beef; Pork: 1.07 lb. of wholesale cuts. ³ Payment to farmer for quantity of live animal equivalent to 1 lb. of retail cuts less value of byproducts Beef, 2.28 lb.; Pork, 1.97 lb. ⁴ Portion of gross farm value attributed to edible and inedible byproducts. ⁵ Gross farm value minus byproduct allowance.

Table 5—Average retail price of meat per pound, United States, by months, 1968 to date¹

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Av.
Beef, Choice grade													
1968	84.3	85.1	85.6	85.6	85.8	85.8	87.1	87.0	88.4	87.7	88.1	88.5	86.6
1969	89.5	89.6	90.9	93.3	97.8	101.9	102.4	101.1	99.1	95.2	96.5	96.9	96.2
1970	97.5	97.3	99.4	99.9	99.4	98.5	100.7	100.4	98.7	97.9	97.6	96.5	98.6
1971	97.2	101.3	102.2	104.0	104.8	105.7	104.7	105.7	105.9	105.1	106.3	108.5	104.3
1972	111.5	115.8	115.8	112.0	111.4	113.5	117.3	115.8	112.9	112.8	112.3	114.6	113.8
1973	122.1	130.3	135.3	136.0	136.0	135.5	136.3	144.2	144.9	136.0	134.9	134.4	135.5
1974	143.0	150.0	142.2	136.4	135.0	132.2	137.9	143.4	141.6	136.8	134.4	132.2	138.8
1975	132.8	129.0	127.0	133.9	147.8	157.8	161.0	155.5	152.8	152.4	151.2	150.6	146.0
1976	148.6	142.7	135.1	142.0	141.7	140.8	138.2	135.8	134.3	133.5	135.7	138.9	138.9
1977	137.5	134.6	133.2	134.0	138.4	137.4	138.3	139.2					
Veal, retail cuts													
1968	99.8	99.2	100.0	102.0	100.0	102.5	101.7	101.4	101.9	101.1	101.9	100.9	101.0
1969	102.5	103.7	104.6	107.5	108.6	112.5	114.0	115.0	115.1	115.2	114.6	116.3	110.8
1970	117.2	119.3	120.8	123.3	123.9	124.9	125.7	126.6	127.0	127.4	127.6	127.9	124.3
1971	128.9	129.4	130.6	132.9	133.7	134.8	138.5	139.3	139.6	140.3	140.6	140.9	135.8
1972	142.8	148.6	149.7	151.0	151.7	154.2	156.4	157.3	157.6	158.4	159.4	159.9	153.9
1973	162.2	169.1	176.9	180.5	181.1	181.3	183.2	188.7	188.5	190.6	186.2	191.6	181.7
1974	194.5	198.4	199.1	194.8	193.3	193.7	192.4	194.8	196.1	192.4	189.1	190.6	194.1
1975	187.0	183.5	179.6	180.2	182.9	183.1	186.6	181.6	178.2	176.8	176.7	177.4	181.1
1976	174.4	173.7	173.3	171.7	173.9	177.2	176.5	175.4	172.9	170.4	170.1	169.8	173.3
1977	176.7	179.3	177.0	178.6	178.5	179.7	180.0	181.9					
Pork													
1968	65.4	66.7	67.1	66.3	66.7	67.8	69.4	69.0	68.8	67.8	67.1	67.0	67.4
1969	67.9	68.6	69.0	69.1	71.6	75.0	76.9	78.3	78.9	78.7	78.1	79.7	74.3
1970	82.1	81.8	81.4	79.9	80.0	80.0	80.6	79.7	76.7	74.6	70.8	68.4	78.0
1971	68.4	69.4	69.9	68.7	68.2	69.6	71.4	71.6	71.0	71.3	71.4	72.9	70.3
1972	76.3	81.3	79.4	78.2	79.4	82.0	85.6	86.0	86.6	87.5	87.2	88.5	83.2
1973	94.1	97.1	103.0	102.7	102.4	104.1	107.5	131.5	126.3	117.1	115.4	115.8	109.8
1974	116.7	117.2	111.8	104.7	99.4	93.7	103.7	108.7	109.9	109.0	111.4	112.7	108.2
1975	114.9	114.8	113.6	115.7	123.0	130.5	143.7	150.2	153.8	158.7	154.0	147.5	135.0
1976	144.2	141.6	138.7	136.6	138.6	140.4	142.1	137.4	132.7	124.8	117.5	117.2	134.3
1977	119.6	121.1	121.0	118.9	120.9	125.7	132.1	130.3					
Lamb, Choice grade													
1968	89.8	90.4	92.0	92.5	93.3	93.7	94.5	93.6	93.1	94.5	94.2	93.5	92.9
1969	94.5	95.9	96.4	97.1	100.1	101.8	104.4	102.9	103.4	103.9	103.7	104.8	100.7
1970	104.8	104.8	104.7	105.6	103.9	105.7	106.0	106.3	106.3	105.9	105.9	106.4	105.5
1971	105.9	106.5	107.0	107.4	108.0	109.6	111.4	111.5	112.6	110.9	112.7	113.0	109.7
1972	113.0	115.3	115.5	116.0	115.7	119.0	121.2	121.5	121.0	121.5	122.5	123.7	118.8
1973	125.6	130.2	136.1	135.5	134.2	132.2	133.4	140.4	145.4	135.2	131.3	131.7	134.3
1974	132.6	138.2	141.9	141.3	141.8	144.4	151.4	151.5	154.1	151.8	152.2	155.9	146.4
1975	156.0	157.1	154.5	158.2	164.2	169.2	174.9	173.5	175.7	175.0	176.5	177.0	167.6
1976	178.3	178.3	181.8	184.0	189.0	194.1	193.6	191.2	185.7	184.9	183.6	182.6	185.6
1977	181.4	182.9	181.3	178.5	183.6	188.7	192.8	193.2					

¹ Estimated weighted average price of retail cuts. Compiled by Economic Research Service from BLS data.

Table 6—Average retail price of specified meat cuts, per pound, by months, 1972 to date

Year and item	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
Beef:												
Porterhouse steak												
1972.....	176.3	180.8	181.3	177.8	175.3	180.1	187.1	187.3	184.9	180.2	182.0	179.7
1973.....	187.7	197.1	201.4	204.4	204.1	206.4	207.7	216.7	216.3	207.6	202.4	200.2
1974.....	201.3	214.7	211.5	206.0	204.1	206.6	205.8	220.2	226.6	216.4	212.0	207.8
1975.....	204.6	203.7	199.1	203.9	224.2	249.1	269.6	264.7	260.3	261.1	253.8	252.6
1976.....	253.7	241.4	235.0	227.9	242.3	243.3	246.6	238.2	238.8	232.0	230.9	234.2
1977.....	234.0	226.7	226.7	230.5	233.6	249.9	251.9	244.6				
Round steak												
1972.....	143.9	151.0	151.3	147.4	143.7	145.9	151.0	150.7	147.1	145.9	147.7	146.6
1973.....	155.9	167.8	174.6	174.8	173.8	173.9	176.3	187.7	188.5	175.8	174.7	171.4
1974.....	176.7	193.4	187.3	178.8	175.6	174.9	174.0	182.9	185.9	178.7	177.8	171.0
1975.....	172.9	171.5	167.9	171.0	186.7	198.9	207.7	202.2	193.7	199.2	195.5	194.6
1976.....	197.0	185.7	180.4	176.2	179.6	177.5	180.1	174.5	175.0	168.8	172.0	173.1
1977.....	174.0	174.4	174.7	175.6	176.9	174.6	174.1	174.6				
Rib roast												
1972.....	126.8	130.5	131.4	129.6	128.1	128.2	132.2	132.2	130.2	128.8	127.8	128.4
1973.....	137.2	142.3	148.6	150.9	152.4	153.4	154.4	160.1	161.5	157.8	154.5	153.8
1974.....	154.8	163.4	159.8	154.7	153.3	152.0	152.1	160.1	168.6	164.5	159.7	158.6
1975.....	160.7	157.3	154.9	155.9	167.8	184.0	206.2	200.3	194.4	191.8	189.6	192.2
1976.....	192.2	182.9	175.7	171.7	179.6	178.8	178.5	175.7	173.9	171.4	171.2	176.8
1977.....	182.0	178.9	175.7	171.5	178.6	182.4	184.6	184.7				
Rump roast												
1972.....	141.0	148.1	149.1	146.0	142.1	145.3	149.3	150.1	147.0	145.7	146.3	145.8
1973.....	153.7	164.4	169.5	169.8	169.7	170.2	171.6	181.7	182.3	172.1	170.8	167.3
1974.....	171.8	186.9	182.0	174.8	172.2	171.6	170.5	177.2	180.8	174.3	174.5	169.9
1975.....	169.3	169.6	167.1	169.6	182.4	191.5	199.8	196.6	187.7	193.7	188.5	187.5
1976.....	191.2	181.8	177.0	173.7	174.7	170.4	175.7	168.8	172.9	167.8	168.0	173.0
1977.....	173.1	169.6	170.4	168.0	168.8	171.1	166.3	169.7				
Chuck roast												
1972.....	79.1	84.2	85.1	83.0	80.7	79.8	83.5	84.6	82.2	81.2	81.1	81.1
1973.....	85.3	96.1	100.6	103.3	103.6	103.3	103.9	114.2	115.0	106.3	101.8	100.5
1974.....	101.0	114.7	113.0	102.7	97.4	95.0	95.4	102.2	105.0	101.2	99.5	98.2
1975.....	91.5	92.1	90.6	90.9	100.7	107.6	116.8	112.5	107.7	108.2	107.3	107.6
1976.....	103.5	102.0	99.2	92.5	99.7	98.8	99.1	94.9	94.6	94.1	92.7	92.0
1977.....	91.0	93.0	91.5	92.5	91.6	92.5	91.5	91.3				
Hamburger												
1972.....	70.6	73.2	74.1	73.8	73.5	74.1	75.1	76.4	75.3	75.7	75.4	75.2
1973.....	78.2	83.9	91.3	94.2	94.6	95.3	94.8	103.8	106.2	104.2	101.5	100.4
1974.....	102.6	109.5	108.4	101.2	97.1	95.2	90.5	94.8	96.4	93.0	89.7	87.5
1975.....	85.4	82.8	80.5	80.5	86.7	90.6	93.8	92.7	90.1	90.8	90.4	88.8
1976.....	89.3	87.7	86.4	85.6	90.4	90.0	88.9	88.8	86.9	85.7	85.9	85.0
1977.....	85.4	85.4	84.9	85.1	86.5	85.8	84.9	85.2				
Veal:												
Cutlet												
1972.....	250.5	260.7	262.7	265.0	266.3	270.7	274.5	276.1	276.6	278.0	279.8	280.8
1973.....	284.6	295.7	308.5	314.0	314.1	313.5	315.9	324.6	323.4	326.2	327.4	326.0
1974.....	341.3	348.4	350.2	343.1	340.9	342.0	340.2	344.8	347.5	341.6	336.2	339.2
1975.....	328.1	323.0	317.2	319.2	325.1	326.4	333.5	325.9	320.9	319.5	320.4	322.7
1976.....	306.0	304.7	303.8	300.9	304.6	309.6	308.9	306.9	302.4	297.8	297.2	296.5
1977.....	310.0	314.5	310.5	313.3	313.2	315.3	315.8	319.1				
Pork:												
Chops												
1972.....	112.3	125.1	119.9	116.8	115.6	120.7	131.6	128.9	132.5	131.3	130.9	129.3
1973.....	139.5	147.7	154.2	145.0	147.0	150.0	152.1	156.5	169.8	157.9	157.6	153.4
1974.....	162.7	164.0	158.5	149.7	143.7	139.8	153.9	158.9	164.5	161.9	161.2	159.0
1975.....	160.7	161.4	161.1	161.4	167.2	183.3	204.1	203.9	205.7	211.0	207.2	199.9
1976.....	190.2	192.8	191.8	184.8	187.1	192.2	194.9	191.9	184.8	174.9	170.3	161.6
1977.....	171.5	183.1	177.7	175.6	173.7	179.1	186.8	189.3				
Roast, loin												
1972.....	79.5	86.9	85.5	82.8	82.1	85.1	93.1	92.1	93.1	93.2	93.3	92.0
1973.....	99.3	105.5	111.9	109.5	108.7	110.1	111.7	151.5	131.3	120.7	119.7	116.9
1974.....	122.9	123.9	121.1	111.7	107.5	102.9	113.3	117.6	121.6	119.8	119.1	117.2
1975.....	121.1	120.4	120.0	119.8	125.0	138.6	156.1	155.9	158.7	162.9	160.4	157.0
1976.....	149.8	151.2	150.0	142.4	146.0	146.7	150.2	148.4	142.6	135.1	129.6	121.5
1977.....	126.9	135.1	131.6	131.1	128.0	134.4	141.0	142.1				
Bacon, sliced												
1972.....	83.2	93.9	92.7	92.5	91.2	93.1	95.7	99.4	99.8	106.0	103.7	103.5
1973.....	107.3	114.7	118.1	121.6	119.5	121.2	123.1	161.0	166.4	152.8	142.9	141.4
1974.....	139.1	143.4	137.1	124.8	118.1	109.7	108.9	132.6	140.6	141.6	143.8	144.2
1975.....	147.1	147.8	149.2	147.9	157.7	165.5	177.9	192.0	211.3	216.1	204.5	190.1
1976.....	176.7	176.1	170.4	170.3	174.4	175.8	182.1	181.8	179.5	168.6	154.3	143.7
1977.....	144.2	149.7	151.7	148.0	152.4	155.8	158.0	168.3				
Ham, whole												
1972.....	74.9	76.6	77.8	76.7	75.2	76.3	77.5	78.0	78.6	79.9	81.9	85.5
1973.....	92.0	91.0	94.8	99.7	98.4	97.8	98.2	121.7	126.0	115.3	117.0	122.2
1974.....	121.3	115.9	114.2	108.9	97.3	92.6	89.9	99.0	101.1	102.7	108.8	113.8
1975.....	114.7	109.9	110.5	109.9	109.0	114.5	120.0	125.6	131.5	144.7	147.9	148.5
1976.....	152.0	142.9	140.0	139.4	137.9	137.3	138.5	137.1	132.8	130.8	124.7	129.5
1977.....	135.4	128.9	129.5	122.9	124.7	125.3	127.7	126.9				
Lamb:												
Chops												
1972.....	192.1	195.5	196.0	195.3	195.0	199.7	203.0	203.6	202.6	203.9	204.0	203.1
1973.....	205.3	218.1	225.5	227.5	226.6	224.5	228.8	241.4	240.8	227.1	223.4	230.1
1974.....	209.2	216.3	219.7	213.2	213.0	222.9	225.7	226.1	226.2	223.2	224.5	227.3
1975.....	252.1	254.8	255.3	256.2	264.4	275.3	280.4	282.3	283.3	282.9	283.2	283.4
1976.....	282.5	281.3	279.9	287.4	302.1	309.4	305.6	305.6	293.0	291.0	289.0	285.7
1977.....	290.3	298.3	296.3	294.0	301.5	306.8	312.5	313.1				

Data from the Bureau of Labor Statistics.

Supply and distribution of commercially produced meat, by months, carcass weight

Meat and period	Supply			Distribution				
	Production ¹	Beginning stocks ⁴	Imports	Exports and shipments	Ending stocks ⁴	Military	Civilian consumption	
							Total	Per person ²
	Million pounds						Pounds	
Beef:								
1976								
July	2,111	405	174	13	392	12	2,273	10.7
August	2,233	392	178	12	372	20	2,399	11.3
September	2,274	372	213	14	393	15	2,437	11.4
October	2,203	393	194	13	415	21	2,341	11.0
November	2,096	415	146	14	440	24	2,179	10.2
December	2,113	440	94	13	464	28	2,142	10.0
1977								
January	2,116	454	143	12	474	21	2,206	10.3
February	1,981	474	173	12	474	11	2,131	10.0
March	2,188	474	150	15	493	18	2,286	10.7
April	1,990	493	156	12	471	12	2,144	10.0
May	1,991	471	160	14	445	12	2,151	10.0
June	2,181	445	144	14	413	15	2,328	10.9
July	1,969	413	165	14	373	12	2,144	10.0
Aug.	2,229	373	186	(15)	353	12	2,402	11.2
Veal:								
1976								
July	63	8	1	1	8	(³)	63	.3
August	67	8	1	2	8	(³)	65	.3
September	75	8	2	1	9	(³)	75	.4
October	75	9	2	1	9	(³)	76	.4
November	72	9	3	1	10	(³)	72	.4
December	77	10	2	1	11	(³)	76	.3
1977								
January	69	11	1	(³)	12	(³)	68	.3
February	63	12	2	(³)	11	(³)	65	.3
March	71	11	2	(³)	11	(³)	70	.3
April	59	11	2	(³)	13	(³)	58	.3
May	61	13	1	(³)	12	(³)	62	.3
June	66	12	1	(³)	12	(³)	64	.3
July	62	12	1	(³)	11	(³)	62	.3
Aug.	73	11	1	(³)	11	(³)	72	.3
Lamb & Mutton:								
1976								
July	28	12	4	(³)	14	(³)	30	.1
August	30	14	4	(³)	15	(³)	33	.1
September	34	15	3	(³)	17	(³)	34	.2
October	31	17	1	(³)	16	(³)	33	.1
November	30	16	3	(³)	17	(³)	31	.1
December	31	17	1	(³)	15	(³)	33	.2
1977								
January	29	15	1	(³)	14	(³)	31	.2
February	27	14	2	(³)	14	(³)	28	.1
March	34	14	3	(³)	12	(³)	38	.2
April	31	12	3	(³)	13	(³)	33	.1
May	26	13	4	(³)	15	(³)	27	.1
June	29	15	2	(³)	14	(³)	31	.2
July	25	14	1	(³)	14	(³)	26	.1
Aug.	29	14	1	(³)	13	(³)	30	.1
Pork: ⁵								
1976								
July	866	235	44	28	194	2	921	4.3
August	1,042	194	30	32	170	6	1,058	5.0
September	1,106	170	32	36	190	7	1,075	5.0
October	1,215	190	37	42	216	7	1,177	5.5
November	1,284	216	38	38	235	9	1,256	5.9
December	1,170	235	38	31	225	8	1,179	5.5
1977								
January	1,024	212	39	27	197	11	1,040	4.9
February	1,013	197	33	29	200	6	1,008	4.7
March	1,256	200	44	37	223	7	1,233	5.7
April	1,120	223	42	33	261	6	1,085	5.1
May	1,044	261	39	37	268	9	1,030	4.8
June	1,022	268	42	34	229	9	1,060	4.9
July	869	229	39	29	179	8	921	4.3
Aug.	1,074	179	35	31	143	8	1,106	5.2
Total Meat:								
1976								
July	3,068	660	223	42	608	14	3,287	15.4
August	3,372	608	213	46	565	27	3,555	16.7
September	3,489	565	250	52	609	22	3,621	17.0
October	3,524	609	234	56	656	29	3,626	17.0
November	3,482	656	190	54	702	34	3,538	16.6
December	3,391	702	135	45	715	38	3,430	16.0
1977								
January	3,238	692	184	40	697	32	3,345	15.7
February	3,084	697	210	42	699	18	3,232	15.1
March	3,549	699	199	55	739	26	3,627	16.9
April	3,200	739	203	46	758	18	3,319	15.5
May	3,122	758	204	53	740	21	3,270	15.2
June	3,298	740	189	51	668	26	3,482	16.2
July	2,925	668	206	44	577	21	3,157	14.7
August	3,405	577	223	47	520	21	3,617	16.8

¹ Excludes production from farm slaughter. ² Derived from estimates by months of population eating out of civilian food supplies.
³ Less than 500,000 lb. ⁴ Beginning 1977, excludes beef and pork stocks in cooler. ⁵ Changed to carcass weight. See article by L.A. Duewer.

Selected price statistics for meat animals and meat

Item	1976	1977								
	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<i>Dollars per 100 pounds</i>										
SLAUGHTER STEERS:										
Omaha:										
Choice, 900-1100 lb.	39.96	38.38	37.98	37.28	40.08	41.98	40.24	40.94	40.11	40.35
Good, 900-1100 lb.	36.11	34.81	34.75	34.34	36.84	38.25	36.77	37.02	36.24	36.24
California, Choice 900-1100 lb.	41.40	38.56	39.44	40.15	42.56	43.50	42.40	42.44	40.53	40.88
Colorado, Choice 900-1100 lb.	39.98	37.55	37.76	37.40	40.67	43.00	40.56	40.94	39.77	40.64
Texas, Choice 900-1100 lb.	41.10	38.40	38.36	37.91	41.17	43.35	40.87	41.25	40.14	40.52
COWS:										
Omaha:										
Commercial	22.39	23.79	24.71	27.64	28.76	27.40	26.47	25.97	25.97	26.72
Utility	21.60	22.95	23.88	26.67	27.63	26.57	25.64	25.23	25.38	26.12
Cutter	20.18	21.55	22.54	25.03	25.98	24.66	23.99	23.85	23.92	24.44
Canner	18.88	19.54	20.59	22.86	24.04	22.88	22.46	22.15	22.12	22.24
VEALERS:										
Choice, S. St. Paul	49.58	53.12	54.88	56.26	52.88	54.92	51.60	46.95	46.20	41.54
FEEDER STEERS:										
Kansas City:										
Choice, 400-500 lb.	38.22	37.99	41.69	44.36	45.72	45.20	42.46	43.14	45.27	46.06
Choice, 600-700 lb.	36.23	36.49	37.86	38.95	41.81	41.72	39.90	40.64	41.99	40.85
Good, 600-700 lb.	30.47	31.41	32.88	35.92	38.30	38.95	37.82	38.48	38.30	36.98
All weights and grades	35.19	34.87	36.54	37.81	41.33	39.88	38.22	38.90	39.61	39.04
Amarillo:										
Choice, 600-700 lb.	35.87	36.47	38.00	38.60	41.81	40.66	38.39	38.71	38.75	39.04
Good, 600-700 lb.	—	—	—	—	—	—	—	—	—	—
Georgia Auctions:										
Choice, 600-700 lb.	32.42	31.75	34.50	35.95	37.81	35.81	34.10	35.00	36.60	36.12
Good, 400-500 lb.	30.17	30.44	33.94	34.90	37.25	35.00	33.15	33.62	35.05	35.12
SLAUGHTER HOGS:										
Barrows and Gilts:										
Omaha:										
Nos. 1 & 2, 200-220 lb.	39.17	40.52	41.06	38.08	37.66	42.62	45.07	46.62	44.81	41.71
Nos. 1 & 2, 220-240 lb.	39.03	40.45	41.08	38.11	37.64	42.60	44.98	46.62	44.81	41.71
All weights	37.47	39.05	40.04	37.45	36.74	41.44	43.41	45.27	43.82	40.17
Sioux City	38.28	39.65	40.40	37.61	37.20	41.94	43.89	45.76	44.34	41.39
7 markets ¹	38.05	39.52	40.18	37.53	36.97	41.79	43.86	45.76	44.38	41.40
Sows:										
7 markets ¹	28.30	33.58	35.84	34.26	34.09	36.99	37.84	38.63	38.00	37.08
FEEDER PIGS:										
Nos. 1 & 2, So. Mo., 40-50 lb. (per hd.)	24.04	23.84	33.24	38.58	41.49	40.91	35.18	36.90	39.84	37.46
SLAUGHTER LAMBS:										
Lambs, Choice, San Angelo	47.69	52.00	51.25	55.70	59.62	55.56	52.10	50.42	51.46	53.75
Lambs, Choice, So. St. Paul	46.32	51.61	52.40	50.83	55.05	57.00	52.57	50.05	48.67	51.28
Ewes, Good, San Angelo	16.88	20.75	19.25	22.15	18.19	16.62	16.00	14.58	16.75	19.62
Ewes, Good, So. St. Paul	10.54	15.90	16.15	15.00	11.40	11.00	11.16	11.00	12.80	14.22
FEEDER LAMBS:										
Choice, San Angelo	51.19	53.56	54.81	56.25	59.19	51.38	46.15	47.33	50.75	54.62
Choice, So. St. Paul	51.91	57.28	55.45	51.30	48.00	47.88	47.44	47.15	48.58	50.55
FARM PRICES:										
Beef cattle:	32.40	32.30	33.10	33.80	34.90	36.10	34.10	34.90	34.70	34.80
Calves	32.80	33.70	35.60	36.60	38.10	38.50	36.00	36.60	37.10	38.30
Hogs	36.30	38.00	39.30	37.10	36.00	40.70	41.90	44.90	42.80	40.20
Sheep	13.00	13.30	13.40	15.00	14.30	13.10	12.00	12.20	12.30	13.20
Lambs	44.70	48.50	49.50	49.20	51.00	55.50	51.20	50.70	49.00	51.20
MEAT PRICES:										
Wholesale:										
Midwest Markets: ²										
Steer beef, Choice, 600-700 lb.	62.52	60.04	58.92	57.12	60.54	64.44	62.62	63.65	62.49	63.07
Heifer beef, Choice, 500-600 lb.	60.72	58.60	57.66	56.05	58.63	63.02	61.84	62.14	60.78	61.09
Cow beef, Canner and Cutter	47.60	49.66	51.09	54.94	56.42	53.31	52.42	51.69	51.12	49.92
Pork loins, 8-14 lb.	73.37	85.32	80.66	72.36	73.42	83.14	87.94	91.66	85.21	85.52
Pork bellies, 12-14 lb.	45.71	51.62	52.08	48.91	55.23	57.10	58.51	63.55	63.96	55.04
Hams, skinned, 14-17 lb.	84.56	69.15	72.82	75.13	63.70	70.39	72.10	72.58	75.47	75.77
East Coast:										
Steer beef, Choice 600-700 lb.	66.25	63.66	62.97	60.46	64.02	67.50	66.00	66.82	66.10	66.71
Lamb, Choice and Prime, 35-45 lb.	97.35	105.76	105.04	110.60	114.00	112.83	106.38	104.72	101.82	107.06
Lamb, Choice and Prime, 55-65 lb.	90.55	96.29	95.44	92.15	110.75	109.62	105.98	103.84	101.67	106.75
West Coast:										
Steer Beef, Choice, 600-700 lb.	67.72	64.45	63.22	63.29	66.26	68.87	68.29	68.98	66.91	66.98
Retail:										
Beef, Choice	138.9	137.5	134.6	133.2	134.0	138.4	137.4	138.3	139.2	
Veal	169.8	176.7	179.3	177.0	178.6	178.5	179.7	180.0	181.9	
Pork	117.2	119.6	121.1	121.0	118.9	120.9	125.7	132.1	130.3	
Lamb	182.6	181.4	182.9	181.3	178.5	183.6	188.7	192.8	193.2	
Price Indexes (BLS, 1967=100)										
Wholesale meat	156.1	165.4	163.4	160.5	159.6	172.1	171.7	177.6	172.8	
Retail meat	167.4	169.9	171.3	170.8	170.1	171.3	174.4	175.8	177.4	
Beef and veal	160.7	162.1	161.5	160.7	161.2	162.8	164.8	164.2	164.0	
Pork	174.7	180.1	185.1	184.1	181.7	182.0	187.0	192.0	196.8	
Other meats	171.8	172.6	173.6	174.5	173.7	175.1	178.0	179.0	179.7	
LIVESTOCK-FEED RATIOS, OMAHA³										
Beef steer-corn	17.4	16.1	16.0	15.9	17.5	19.0	19.2	21.5	24.2	24.2
Hog-corn	16.4	16.4	16.8	15.9	16.0	18.8	20.7	23.8	26.4	24.1

¹ St. Louis N.S.Y., Kansas City, Omaha, Sioux City, S. St. Joseph, S. St. Paul, and Indianapolis. ² Prior to Oct., 1975, Chicago Market. ³ Bushels of No. 2 Yellow Corn equivalent in value of 100 pounds liveweight.

Selected marketings, slaughter and stock statistics for meat animals and meat⁵

Item	Unit	1977											
		1976						1977					
		Oct.	Nov.	Dec.	Jan. ⁴	Feb.	Mar.	Apr.	May	June	July	Aug.	
FEDERALLY INSPECTED:													
Slaughter:													
Cattle	1,000 head	3,336	3,154	3,205	3,272	3,041	3,330	3,033	3,054	3,374	3,085	3,489	
Steers	1,000 head	1,434	1,296	1,361	1,418	1,374	1,575	1,485	1,488	1,683	1,481	1,636	
Heifers	1,000 head	965	880	884	849	859	943	852	1,481	890	839	990	
Cows	1,000 head	863	904	893	849	745	743	629	654	726	695	782	
Bulls and stags	1,000 head	74	74	67	61	63	69	67	70	75	71	80	
Calves	1,000 head	394	388	420	408	380	457	389	353	368	352	411	
Sheep and lambs	1,000 head	556	517	534	498	461	579	539	474	550	468	553	
Hogs	1,000 head	6,929	7,110	6,525	5,840	5,825	7,236	6,400	5,877	5,695	4,908	6,149	
Percent sows	Percent	5	6	6	5	6	5	4	5	6	7	6	
Average live weight per head													
Cattle	Pounds	1,032	1,036	1,037	1,045	1,043	1,048	1,042	1,037	1,032	1,023	1,021	
Calves	Pounds	230	227	237	211	210	195	195	209	214	207	214	
Sheep and lambs	Pounds	111	112	112	112	114	114	112	106	104	104	103	
Hogs	Pounds	238	243	239	234	233	234	236	239	241	239	237	
Average dressed weight													
Beef	Pounds	611	610	611	607	608	614	614	612	609	602	602	
Veal	Pounds	131	130	138	123	125	116	114	123	126	123	125	
Lamb and mutton	Pounds	55	56	56	57	57	58	56	52	51	51	51	
Pork	Pounds	169	173	170	168	167	167	169	171	173	171	169	
Production:													
Beef	Mil. lb.	2,031	1,918	1,951	1,975	1,841	2,034	1,855	1,859	2,047	1,850	2,089	
Veal	Mil. lb.	51	50	57	50	46	52	43	42	45	42	51	
Lamb and mutton	Mil. lb.	31	29	30	30	26	33	28	24	28	24	28	
Pork	Mil. lb.	1,169	1,227	1,111	976	968	1,208	1,077	1,001	979	834	1,033	
COMMERCIAL:													
Slaughter:													
Cattle	1,000 head	3,660	3,492	3,510	3,546	3,299	3,616	3,272	3,299	3,627	3,307	3,751	
Calves	1,000 head	480	466	490	480	443	519	445	419	442	421	485	
Sheep and lambs	1,000 head	574	534	551	513	474	595	562	492	570	486	578	
Hogs	1,000 head	7,211	7,458	6,880	6,127	6,096	7,545	6,658	6,134	5,957	5,120	6,411	
Production:													
Beef	Mil. lb.	2,203	2,096	2,113	2,116	1,981	2,188	1,990	1,991	2,181	1,969	2,229	
Veal	Mil. lb.	75	72	77	69	63	71	59	61	66	62	73	
Lamb and mutton	Mil. lb.	31	30	31	29	27	34	31	26	29	25	29	
Pork	Mil. lb.	1,215	1,284	1,170	1,024	1,013	1,256	1,120	1,044	1,022	869	1,074	
COLD STORAGE STOCKS													
FIRST OF MONTH:													
Beef	Mil. lb.	394	414	443	454	474	474	493	471	445	413	374	
Veal	Mil. lb.	9	9	10	11	12	11	11	13	12	12	11	
Lamb and mutton	Mil. lb.	17	16	17	15	14	14	12	13	12	14	12	
Pork	Mil. lb.	189	216	235	212	197	200	223	261	268	229	179	
Total meat and meat products ³	Mil. lb.	663	711	755	733	745	755	795	818	798	726	629	
FOREIGN TRADE:													
Imports: (carcass weight)													
Beef and veal	Mil. lb.	196	149	96	144	175	152	158	161	145	166	187	
Pork	Mil. lb.	37	38	38	39	33	44	42	39	42	39	35	
Lamb and mutton	Mil. lb.	1	3	1	1	2	3	3	4	2	1	1	
Exports: (carcass weight)													
Beef and veal	Mil. lb.	8,69	7,31	6,83	6,25	7,36	8,39	6,74	7,63	8,96	9,13	10,36	
Pork	Mil. lb.	33,12	26,82	21,96	18,68	21,47	28,16	22,50	26,70	24,46	21,51	23,11	
Lamb and mutton	Mil. lb.	.44	.34	.28	.36	.29	.71	.35	.49	.28	.21	.19	
Live animal imports:													
Cattle	Number	34,855	138,035	259,316	106,120	64,091	77,295	84,694	109,891	82,838	36,451	32,183	
Hogs	Number	2,766	2,730	2,884	2,190	2,606	5,043	2,498	2,772	3,881	5,368	4,519	
Sheep and lambs	Number	1,569	1,129	473	0	0	118	59	22	23	47	979	
Live animal exports:													
Cattle	Number	16,966	12,401	7,417	6,080	4,829	5,951	6,874	7,166	8,750	8,159	9,672	
Hogs	Number	532	1,715	1,181	626	567	1,004	1,045	312	1,768	289	933	
Sheep and lambs	Number	16,899	16,567	20,254	6,900	15,779	20,894	23,870	17,945	11,759	8,798	13,281	

¹ Federally inspected and other commercial. ² Beginning Jan. 1977 excludes beef and pork stocks in cooler. ³ Includes stocks of canned meats in addition to the meats listed. ⁴ Slaughter and production data revised. ⁵ Pork production series changed to carcass weight, see special article by L.A. Duewer.

Table 7—Corn Belt cattle feeding

Selected expenses at current rates¹

	June 76		July		Aug.		Sept.		Oct.		Nov.		Dec.		Jan. 77		Feb.		Mar.		Apr.		May		June		July		Aug.		Sept.	
	Dollars	per head	Dollars	per head	Dollars	per head	Dollars	per head	Dollars	per head	Dollars	per head	Dollars	per head	Dollars	per head	Dollars	per head	Dollars	per head	Dollars	per head	Dollars	per head	Dollars	per head	Dollars	per head	Dollars	per head		
Purchased during																																
Marketed during																																
Expenses:																																
600 lb. feeder steer	256.98	235.08	233.64	217.08	220.32	217.56	217.38	218.94	227.16	233.70	250.86	250.32	239.40	243.84	251.94	245.10																
Transportation to feedlot (400 miles)	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28																
Corn (45 bu.)	123.75	127.35	117.90	117.90	103.50	90.90	101.70	105.30	104.85	104.85	104.40	99.45	94.50	86.40	72.90	70.20																
Slilage (1.7 tons)	37.40	38.15	36.50	37.77	35.33	33.37	36.40	38.05	38.39	38.45	36.75	34.63	32.71	30.97	27.30	26.16																
Protein supplement (270 lb.)	27.27	28.35	26.60	28.35	27.14	27.14	28.48	29.02	28.76	29.84	31.86	32.40	31.05	27.81	25.92	24.84																
Hay (400 lb.)	10.00	10.05	10.15	11.05	11.25	11.55	12.25	12.95	13.25	13.30	12.15	11.30	10.60	10.45	9.65	9.20																
Labor (4 hours)	10.32	10.32	9.56	9.56	9.56	9.84	9.84	9.84	10.24	10.24	10.24	10.72	10.72	10.72	10.32	10.32																
Management ¹	5.16	5.16	4.78	4.78	4.78	4.92	4.92	4.92	5.12	5.12	5.12	5.36	5.36	5.36	5.16	5.16																
Vet medicine ³	3.09	3.10	3.09	3.09	3.06	3.06	3.09	3.16	3.19	3.22	3.25	3.27	3.25	3.24	3.22	3.22																
Interest on purchase (6 mo.)	11.56	10.58	10.51	9.77	9.91	9.79	9.78	9.85	10.22	10.52	11.29	11.26	10.77	10.97	11.34	11.03																
Power, equip., fuel, shelter, depreciation	14.40	14.47	14.40	14.40	14.29	14.29	14.40	14.75	14.88	15.02	15.17	15.23	15.17	15.12	15.04	15.02																
Death loss (1% of purchase)	2.57	2.35	2.34	2.18	2.20	2.18	2.17	2.19	2.27	2.34	2.51	2.50	2.39	2.44	2.52	2.45																
Transportation (100 miles)	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31																
Marketing expenses	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35																
Miscellaneous & indirect costs ³	6.23	6.26	6.23	6.23	6.18	6.18	6.23	6.38	6.44	6.49	6.56	6.59	6.56	6.54	6.50	6.49																
Total	519.67	502.16	486.64	473.10	458.46	441.72	457.58	466.29	475.71	484.03	501.10	493.97	473.42	464.80	452.75	440.13																
Selling price/cwt. required to cover feed and feeder costs (1050 lb.)	43.37	40.85	40.46	39.25	37.86	36.24	37.73	38.50	39.28	40.01	41.53	40.77	38.88	38.04	36.92	35.76																
Selling price/cwt. required to cover all costs (1050 lb.)	49.49	47.82	46.35	45.06	43.66	42.07	43.58	44.41	45.31	46.10	47.72	47.04	45.09	44.27	43.12	41.92																
Feed cost per 100 lb. gain	44.09	45.31	42.48	43.35	39.38	36.21	39.74	41.18	41.17	41.43	41.15	39.51	37.52	34.58	30.17	28.98																
Choice steers, Omaha	39.96	38.38	37.98	37.28	40.08	41.98	40.24	40.94	40.11	40.35																						
Net margin/cwt.	-9.53	-9.44	-8.37	-7.78	-3.58	-0.09	-3.34	-3.47	-5.20	-5.75																						
Prices																																
Feeder, steer Choice (600-700 lb.)	42.83	39.18	38.94	36.18	36.72	36.26	36.23	36.49	37.86	38.95	41.81	41.72	39.90	40.64	41.99	40.85																
Kansas City/cwt.	2.75	2.83	2.62	2.62	2.30	2.02	2.26	2.34	2.33	2.33	2.32	2.21	2.10	1.92	1.62	1.56																
Corn/bu.	50.00	50.25	50.75	55.25	56.25	57.75	61.25	64.75	66.25	66.50	60.75	56.50	53.00	52.25	48.25	46.00																
Hay/ton	22.00	22.44	21.47	22.22	20.78	19.63	21.41	22.38	22.58	22.62	21.62	20.37	19.24	18.22	16.06	15.39																
Corn silage /ton ⁵	10.10	10.50	9.85	10.50	10.05	10.05	10.55	10.75	10.65	11.05	11.80	12.00	11.50	10.30	9.60	9.20																
32-36% Protein supp./cwt. ⁶	2.58	2.58	2.39	2.39	2.39	2.46	2.46	2.46	2.56	2.56	2.56	2.68	2.68	2.68	2.58	2.58																
Farm Labor/hour ⁷	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00																
Interest annual rate	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22																
Transportation rate/cwt.	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35																
100 mile																																
Marketing expenses ⁸																																
Index of prices paid by farmers (1910-14=100)	657	660	657	657	652	652	657	673	679	685	692	695	692	690	686	685																

¹ Represents only what expenses would be if all selected items were paid for during the period indicated. The feed ration and expense items do not necessarily coincide with experience of individual feeders. For individual use, adjust expenses and prices for management, production level and locality of operation.

² Assumes one hour at twice the labor rate.

³ Adjusted monthly by the index of prices paid by farmers for commodities, services, interest, taxes and wage rates.

⁴ Average price received by farmers in Iowa and Illinois.

⁵ Corn silage price derived from an market.

⁶ equivalent price of 5 bushels corn and 330 lb. hay.

⁷ Average price paid by farmers in Iowa and Illinois.

⁸ Converted from cents/mile for a 44,000 pound haul.

⁹ Yardage plus commission fees at a midwest terminal

Table 8—Great Plains Custom cattle feeding¹

Purchased during Marketed during	June 76 Dec. 76	July Jan. 77	Aug. Feb.	Sept. Mar.	Oct. Apr.	Nov. May	Dec. June	Jan. 77 July	Feb. Aug.	Mar. Sept.	Apr. Oct.	May Nov.	June Dec.	July Jan. 78	Aug. Feb.	Sept. Mar.
	Dollars per head	Dollars per head	Dollars per head	Dollars per head	Dollars per head	Dollars per head	Dollars per head	Dollars per head	Dollars per head	Dollars per head	Dollars per head	Dollars per head	Dollars per head	Dollars per head	Dollars per head	Dollars per head
Expenses:																
600 lb. feeder steer	248.22	234.24	231.00	208.86	210.24	208.14	215.22	218.82	228.00	231.60	250.86	243.96	230.34	232.26	232.50	234.24
Transportation to feedlot (300 mi.) ..	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96
Commission	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Feed:																
milo (1,500 lb.)	72.75	75.60	68.10	66.15	60.90	57.60	57.30	58.50	59.10	58.05	58.05	56.10	51.90	51.90	48.00	49.35
corn (1,500 lb.)	81.75	82.50	75.75	70.50	66.30	62.40	64.05	66.90	66.00	64.80	65.55	64.50	58.35	56.55	52.20	53.25
cottonseed meal (400 lb.)	38.80	43.20	42.00	42.40	42.40	43.60	43.60	44.80	46.40	46.80	47.20	48.00	47.60	43.60	43.60	38.80
alfalfa hay (800 lb.)	38.00	39.20	39.00	39.40	39.00	38.80	38.60	36.80	40.00	39.40	39.60	38.00	37.20	38.00	38.20	38.40
Total feed cost	231.30	240.50	224.85	218.45	208.60	200.80	203.55	207.00	211.50	209.05	210.40	207.00	196.25	194.05	182.00	179.80
Feed handling & management																
charge	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00
Vet medicine	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Interest on feeder & 1/2 feed	17.28	16.84	16.31	15.11	14.55	14.27	14.66	14.91	15.44	15.55	16.47	16.07	15.19	15.22	14.96	14.99
Death loss (1.5% of purchase)	3.72	3.51	3.46	3.13	3.15	3.12	3.23	3.28	3.42	3.47	3.76	3.66	3.46	3.48	3.49	3.51
Marketing ²	F.O.B.	F.O.B.	F.O.B.	F.O.B.	F.O.B.	F.O.B.	F.O.B.	F.O.B.	F.O.B.	F.O.B.	F.O.B.	F.O.B.	F.O.B.	F.O.B.	F.O.B.	F.O.B.
Total	531.48	526.05	506.58	476.51	467.50	457.29	467.62	474.97	489.32	490.63	512.45	501.65	476.20	476.45	463.91	463.50

	June 76 Dec. 76	July Jan. 77	Aug. Feb.	Sept. Mar.	Oct. Apr.	Nov. May	Dec. June	Jan. 77 July	Feb. Aug.	Mar. Sept.	Apr. Oct.	May Nov.	June Dec.	July Jan. 78	Aug. Feb.	Sept. Mar.
	Dollars per cwt.	Dollars per cwt.	Dollars per cwt.	Dollars per cwt.	Dollars per cwt.	Dollars per cwt.	Dollars per cwt.	Dollars per cwt.	Dollars per cwt.	Dollars per cwt.	Dollars per cwt.	Dollars per cwt.	Dollars per cwt.	Dollars per cwt.	Dollars per cwt.	Dollars per cwt.
Selling price required to cover³:																
feed and feeder cost (1,056 lb.) ..	45.41	44.96	43.17	40.46	39.66	38.73	39.66	40.32	41.62	41.73	43.68	42.70	40.40	40.37	39.25	39.21
all costs	50.33	49.82	47.97	45.12	44.27	43.30	44.28	44.98	46.34	46.46	48.53	47.50	45.09	45.12	43.93	43.89
Selling price \$/cwt. ⁴	41.10	38.40	38.36	37.91	41.17	43.35	40.87	41.25	40.14	40.52						
Net margin/cwt.	-9.23	-11.42	-9.61	-7.21	-3.10	-0.05	-3.41	-3.73	-6.20	-5.94						
Costs per 100 lb. gain:																
Variable costs less interest	51.80	53.60	50.46	49.12	47.15	45.58	46.16	46.86	47.78	47.30	47.63	46.93	44.74	44.31	41.90	41.46
Feed costs	46.26	48.10	44.97	43.69	41.72	40.16	40.71	41.40	42.30	41.81	42.08	41.40	39.25	38.81	36.40	35.96

Unit Prices:

Choice feeder steer 600-700 lb.	41.37	39.04	38.50	34.81	35.04	34.69	35.87	36.47	38.00	38.60	41.81	40.66	38.39	38.71	38.75	39.04
Amarillo \$/cwt.																
Transportation rate \$/cwt/100 miles ⁵ .....	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22
Commission fee \$/cwt. ....	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50
Milo \$/cwt. ⁶	4.85	5.04	4.54	4.41	4.06	3.84	3.82	3.90	3.94	3.87	3.87	3.74	3.46	3.46	3.20	3.29
Corn \$/cwt. ⁶	5.45	5.50	5.05	4.70	4.42	4.16	4.27	4.46	4.40	4.32	4.37	4.30	3.89	3.77	3.48	3.55
Cottonseed meal \$/cwt.	9.70	10.80	10.50	10.60	10.60	10.50	10.90	11.20	11.60	11.70	11.80	12.10	12.20	11.90	10.90	9.70
Alfalfa hay \$/ton ⁷	95.00	98.00	97.50	98.50	97.50	97.00	96.50	92.00	100.00	98.50	99.00	95.00	93.00	95.00	95.50	96.00
Feed handling & management																
charge \$/ton	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Interest, annual rate	9.50	9.50	9.50	9.50	9.25	9.25	9.25	9.25	9.25	9.25	9.25	9.25	9.25	9.25	9.25	9.25

¹ Represents only what expenses would be if all selected items were paid for during the period indicated. The feed ration and expense items do not necessarily coincide with experience of individual feedlots. For individual use, adjust expenses and prices for management, production level, and locality of operation. Steers are assumed to gain 500 lb in 180 days at 2.8 lb. per day with a feed conversion of 8.4 lb. per pound gain. ² Most cattle sold F.O.B. the feedlot with 4 percent shrink. ³ Sale weight 1,056 pounds (1,100 pounds less 4 percent shrink) ⁴ Choice slaughter steers, 900-1,100 lb., Texas-New Mexico direct. ⁵ Converted from cents per mile for a 44,000 pound haul. ⁶ Texas Panhandle elevator price plus \$15/cwt. handling and transportation to feed lots. ⁷ Average prices received by farmers in Texas. ⁸ Average prices received by farmers in Texas plus \$30/ton handling and transportation to feedlots.

FOOD AND DRUG ADMINISTRATION PROPOSAL TO RESTRICT THE USE OF SELECTED ANTIBIOTICS AT SUBTHERAPEUTIC LEVELS IN ANIMAL FEEDS

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INTRODUCTION

The Food and Drug Administration (FDA) announced on August 29, 1977, a proposal to prohibit the routine addition of the antibiotic penicillin to animal feeds. This article attempts to place in perspective the complex and extremely controversial issue of restricting the practice of using certain antibiotics at subtherapeutic levels in animal feeds.¹

SUBTHERAPEUTIC USE OF ANTIBIOTICS IN ANIMAL FEEDS

Use of antibiotics to improve growth and feed efficiency in animals originated in 1949; commercialization began in 1950. Since then, 15 antibiotics and other antibacterials, either singly or in various combinations, have been approved by FDA for use in animal feeds as well as for clinical treatment of animals.

Antibiotics are extensively used at subtherapeutic levels in feeds for poultry, swine, beef cattle, sheep, and dairy calves. Research data clearly indicate that this practice aids in the improvement of feed efficiency, increases the rate of weight gain, and prevents and controls diseases that would otherwise increase morbidity and mortality in animals. Large-scale confinement rearing of these animals has been facilitated by the use of antibiotics along with all the economies of size of such operations. Further, improved feed efficiency has reduced the feed input per unit of output and has had an impact upon the demand for feed grains and other ingredients. Increased rate of weight gain has reduced the input requirements for labor and capital items.

However, placing an economic value on the benefits from the subtherapeutic use of antibiotics is difficult since the practice grew simultaneously with and complemented improvements in management skills and animal genetics, nutrition, and disease treatment. Estimating the economic benefits of antibiotics is further complicated by the lack of comparative data on disease control, particularly after sustained use. Each of the animal species responds differently to the various antibiotics. Specific responses of feeding subtherapeutic levels of antibiotics are as follows:

Cattle: Antibiotics improve feed conversion and increase rate of weight gain by (1) reducing incidence of disorders in the digestive tract; (2) reducing incidence of liver abscesses; (3) aiding in the maintenance of the animal's general health and controlling of subclinical infections; and (4) controlling the disease anaplasmosis.

Swine: Use of antibiotics in swine (1) aids in the prevention and control of baby pig diseases; (2) increases rate of weight gain; (3) improves feed efficiency; and (4) improves reproductive performance.

Poultry: Low-level feeding of antibiotics to poultry will (1) increase production in layers and turkey breeders; (2) increase rate of weight gain in turkey poults and broilers; (3) improve feed efficiency; and (4) prevent onset of diseases associated with intensive rearing.

Sheep: Antibiotics are most important for lambs in feedlots to (1) improve rate of weight gain, and (2) prevent onset of diseases associated with confinement rearing.

How antibiotics work at subtherapeutic levels is not clearly understood. Three ways have been most commonly postulated, and each has varying degrees of support. They are (1) a metabolic effect, in that the antibiotics directly affect the rate or pattern of the metabolic processes in the host animal; (2) a nutrient-sparing effect in which the anti-

¹Condensed from ERS-662 published in September 1977 under the same title.

biotics may reduce the dietary requirements for certain nutrients; and (3) a disease control effect where antibiotics suppress organisms causing clinical or subclinical manifestations of disease. Although there is extensive evidence of the nutrition and metabolic response relationship, these effects are generally considered secondary to the disease-control effect.

PUBLIC HEALTH PROBLEM

Controversy on restricting the subtherapeutic level use of antibiotics arises from the potential public health hazard of the practice. It was not observed until 1955 that bacteria could develop a resistance to antibiotics. But this observation was not in connection with animal feeding of antibiotics. The passage of time and accompanying research on antibiotic resistant organisms provided the information to develop three hypotheses on how the practice of feeding antibiotics to animals could be a health hazard to other animals and to humans.

First, it is known that certain pathogenic organisms such as salmonella, existing in the gastrointestinal tract of animals, can become resistant to the antibiotic fed to the host animal at subtherapeutic levels and over time be passed into the environment and/or food to humans. Since the organisms are antibiotic resistant, the hypothesis is that they could produce infection in humans or other animals and the same antibiotic would be an ineffective means of treatment.

The second hypothesis concerns the ability of organisms to transfer antibiotic resistance to other organisms and therefore cause widespread infection among people and animals that cannot be successfully treated with the same antibiotic.

The third hypothesis is that trace amounts of antibiotic residue in animal tissue, milk, and eggs may lead to the emergence of resistant strains of organisms in people. This is considered to be the least likely means of developing drug resistant bacteria.

Proponents and opponents of the proposal to restrict use of antibiotics in animal feeds have placed different interpretations on the potential danger of the health hazard from drug resistant bacteria. Proponents admit that the drug resistant organisms may be non-infectious or less viable than their non-resistant predecessors. But they note this should not be interpreted as meaning that by selection pressures or evolution a highly infectious and viable drug pathogen organism will not appear. There is recent evidence that such a series of events may have already occurred.

Opponents point to the lack of evidence of the magnitude of the health hazard and in particular

refer to the incidence of salmonellosis, a disease of humans caused by salmonella bacteria that are known to be becoming antibiotic resistant as a result of the use of antibiotics in feed. Cases of salmonellosis reported to the Center for Disease Control (CDC) in Atlanta, Georgia, are indicated in the following table.

Number and incidence of reported salmonellosis cases, 1966-1975

Year	No. of cases	Cases per 100,000 people
1966	16,841	8.60
1967	18,120	9.16
1968	16,514	8.26
1969	18,419	9.12
1970	22,096	10.84
1971	21,928	10.63
1972	22,151	10.64
1973	23,818	11.35
1974	21,980	10.40
1975	22,612	10.61

Source: Center for Disease Control, HEW.

The number of cases and incidence of salmonellosis increased between 1966 and 1970 and has remained roughly constant since. The increase in the annual number of cases between 1966 and 1970 is probably due to improved reporting. As the reporting network between the State and local health departments and the CDC improved, the number of reported cases increased. Proponents also note there has been no change in antibiotic resistance demonstrated in the treatment of human cases. The same antibiotics have been effective for years.

While there is substantial evidence available to validate the benefits to society from the use of antibiotics at subtherapeutic levels in animal feeds, these benefits must be weighed against the theoretical risks of creating some highly infectious and viable drug resistant organism in the future that would be very harmful to human and animal health.

ANTIBIOTIC POLICY DEVELOPMENT

Great Britain made an extensive study of the antibiotics situation and adopted several changes in drug policy. In 1968, the Swann Committee was appointed to investigate the matter of subtherapeutic use of antibiotics in animal feed and make recommendations following an epidemic of *Salmonella typhimurium* type 29 (food poisoning) in dairy calves that subsequently spread to humans. (It was never established that use of antibiotics in animal feeds contributed to the spread of this infection from animals to humans.)

The Committee subsequently recommended that antibiotics and other antibacterials be separated into a "feed" class and a "therapeutic" class. The tetracycline, penicillin, tylosin, and sulfonamide antibiotics and the antibacterial nitrofurans should be restricted to therapeutic use only and controlled by issuance of veterinary prescriptions. Antibiotics such as bacitracin, flavomycin, virginiamycin, and nitrovin would be used exclusively as "feed" antibiotics subject only to recommendations pertaining to level of use. The report was adopted by the British Government in 1971.

Compared to the British, the pace of the U.S. FDA in altering the use of antimicrobial drugs has been much slower and apparently more deliberate. In 1966, the FDA completed an inquiry into veterinary medical and non-medical uses of antibiotics. The only action was the revocation of licenses to permit the direct use of antibiotics in foods for preservation purposes.

Following the Swann Committee report, FDA appointed a task force to investigate the use of antibiotics in feed. The report, published in 1972, recognized the potential health hazard of drug resistant bacteria and means of transmission to humans along with the larger problem of compromising the use of drugs for therapeutic purposes.

In 1973, FDA published a statement of policy and criteria for testing antibiotics in order to answer the questions raised by the 1972 report.² Special attention was focused on the tetracyclines, streptomycin, dihydrostreptomycin, penicillin, and sulfonamides as to their effect on the salmonella reservoir in animals. Manufacturers were given until April 1975 to provide data on safety and effectiveness of products.

CURRENT SITUATION

On May 27, 1977, the FDA Commissioner published in the *Federal Register* a notice, "Intent to Propose Rules and Call for Environmental Impact Data." FDA's general steps in the overall process to carry out this intent include:

- (1) Terminate all subtherapeutic use of penicillin in all feed (proposed on Aug. 29, 1977);
- (2) Terminate the use of the tetracyclines in situations where there are viable alternatives;
- (3) Impose restrictions on the distribution and use of the remaining uses of penicillin and tetracyclines; and
- (4) Expedite implementation of the drug efficacy study implementation (DESI) notices proposing to

withdraw approval of all penicillin and tetracycline combination products that lack evidence of effectiveness.

The second part of the notice was a request for environmental information from interested parties on introduction into the environment, fate in the environment, and environmental effects of penicillin and tetracyclines and other drugs that would be indirectly affected in terms of use as alternatives to penicillin and tetracyclines. The closing date for receiving information was July 26, 1977. FDA's Bureau of Veterinary Medicine indicates that it will assess the environmental data to determine if a program environmental impact statement encompassing all the actions will be required prior to final proposed actions.

On August 29, 1977, FDA proposed to prohibit the routine addition of the antibiotic penicillin to animal feeds. The proposal, appearing in the August 30 *Federal Register*, is the first step, according to FDA, "in a long-range FDA effort to limit the addition to animal feeds of antibiotics that are important in combating disease in people or animals."

This proposed action, as well as future proposals, could have a significant impact upon the efficiency of production of cattle, swine, and poultry. According to the FDA, tetracycline, penicillin, and combinations with other antibacterials are estimated to be used in feed for all turkeys, 80 percent of the swine and veal calves, 60 percent of the cattle, and 30 percent of the chickens raised for food in the United States. However, tetracyclines are apparently used much more extensively than penicillin.

The magnitude of the impact from restricting the use of penicillin and tetracycline, both in technical and economic terms will depend upon officially sanctioned types and availability of antibacterial substitutes and those specific situations where tetracyclines can be used at subtherapeutic levels where no viable alternative is known to exist. When FDA publishes an official list of substitutes and their uses and permitted uses of the tetracyclines, it will be possible to estimate the technical and economic impacts of the proposed action upon the output of animals and animal products, cost of production, and farm and retail prices.

ECONOMIC RESEARCH

Recent studies, including two by the Economic Research Service and one by FDA, report the economic consequences of restricting the use of antibiotics at subtherapeutic levels in poultry, swine, and livestock production. The Gilliam report (ERS),

²Task Force Report to the FDA Commissioner on the Use of Antibiotics in Animal Feeds (FDA 72-6008) Jan. 1972.

addressing the impact on swine and cattle production, examined the economic effects of three alternative producer reactions assuming a complete ban on the use of antibiotics at subtherapeutic levels.³ Although such an all-inclusive ban has never been proposed, results reveal importance of antibiotics to efficient production of livestock. For example, maintaining output at 1970 levels by either feeding the same number of animals longer or feeding more animals for the same feeding period duration would increase cattle production costs by approximately 50 cents per 100 pounds and hog production costs from \$1.00 to \$1.30 per 100 pounds. The impact on total annual production costs for beef and pork ranges from \$370 to \$470 million.

If producers increased neither the number of animals fed nor the length of the feeding period following the ban, beef and pork output would decrease and prices would increase. Consumer expenditures would increase by \$1.6 billion as a result of higher prices paid for the smaller supply. Producer revenues would increase by \$1.9 billion as a result of higher prices received and reductions in total costs from nonpurchase of antibiotics and feed. The study assumed 1970 prices and output levels for basis of calculation. It should be noted that, with a longer run period for adjustment, producers would probably adjust both numbers of animals and length of feeding period. As a result, the economic impact of a total ban would fall in between the ranges cited above.

Allen and Burbee addressed the impact on turkey and broiler production but used two sets of assumptions: (1) a total ban and (2) availability of antibiotic substitutes.⁴ Under the first assumption, using 1970 prices and output levels, broiler production costs would increase by 0.2 to 0.25 cents per pound while turkey production costs would increase by 0.55 to 0.9 cents per pound. Without any change in numbers of birds produced and duration of the feeding period, annual consumer expenditures would increase by approximately \$200 million as a result of higher prices for the reduced meat output. Under the second assumption, statistical analyses were used to evaluate the substitutability of several antibiotics. No significant difference could be found in terms of feed and growth efficacy, leading to the conclusion that a proposed restriction on use of some antibiotics would not have a significant economic impact.

Mann and Paulsen used an econometric simulation model to evaluate the impact of restricting antibiotics as animal feed additives on beef, pork, broiler, and turkey production over a 10-year period.⁵ Under the model, all the restrictive policy alternatives produced wholesale price increases. Simulation estimates of price and production cost increases, however, were lower than previous findings by the Gilliam study. This difference may be partly due to a lower estimate of the rate of feed additive use by producers, an assumption that would lessen the impact of a ban on feed additives. Total consumer expenditures for beef, veal, and pork were estimated to increase about \$500 million over 5 years.

An FDA study examined the economic consequences of restricting the subtherapeutic use of tetracyclines in feedlot cattle and swine.⁶ Impacts resulting from the use of only non-medicated feeds and from using substitute feed additives were determined. Results indicated that if producers use non-medicated feeds and maintain pre-ban production levels, the beef and pork feedlot industry would suffer an adverse impact of \$680 million while consumers would experience zero, or no immediate impact. This is because the impact on producers is primarily due to increased costs which have no direct effect on the market price in the short run analyzed. In the long run, some producers may withdraw from the market or may curtail production and would thus indirectly affect prices to consumers. If non-medicated feeds are used and animals are fed for the same period as before the ban, the feedlot industry in the short run would profit by \$972 million and consumers would bear an adverse impact of \$1,901 million.

The FDA study also found that the use of substitute feed additives would narrow the ranges of impact considerably. If producers elect to maintain pre-ban production levels, their adverse impact would be \$74 million in higher costs, with zero immediate consumer impact. On the other hand, if producers choose to maintain pre-ban feeding periods, their net gain would be \$195 million and consumers would incur additional costs of \$241 million as a result of lower output.

In summary, the differences in the costs and benefits shown by the studies cited is due to the basic assumptions of cost and availability of antibiotics.

³H. Gilliam, et. al., "Economic Consequences of Banning the Use of Antibiotics at Subtherapeutic Levels in Livestock Production," Texas A&M Univ. in cooperation with Econ. Res. Serv., Exp. Sta. Rpt. 73-2, Sept. 1973.

⁴G. Allen and C. Burbee, "Economic Consequences of the Restricted Use of Antibiotics at Subtherapeutic Levels in Broiler and Turkey Production," unpublished staff paper, Econ. Res. Serv., U.S. Dept. Agr., Nov. 1972.

⁵T. Mann and A. Paulsen, "Economic Impact of Restricting Feed Additives in Livestock and Poultry Production," *Amer. J. Agr. Econ.*, 58(1), Feb. 1976, pp. 47-53.

⁶Food and Drug Administration, "Some Economic Consequences of Restricting the Subtherapeutic Use of Tetracyclines in Feedlot Cattle and Swine," OPE Study 33, Nov. 1976.

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